

Volume 6

MONOCOTYLEDONS
(ACORACEAE
THROUGH NAIADACEAE)



ILLUSTRATED FLORA OF BRITISH COLUMBIA

edited by George W. Douglas, Del Meidinger and Jim Pojar



**BRITISH
COLUMBIA**

Ministry of Environment, Lands and Parks
Ministry of Forests

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FOREWORD

British Columbia, Canada's most westerly province, has a bounty of biological diversity. British Columbia's snowclad peaks, rain-drenched forests, arid grasslands, all sizes of rivers, lakes, and wetlands, and a long and rugged coast provide habitats for more species of living organisms than are found anywhere else in Canada. However, this very diversity means that there is much to be discovered about these organisms – their distribution, abundance, habitat requirements, and interrelationships with their environment. Increasing our knowledge of this biodiversity will help us with the complex task of sustainably managing our land and waters.

In 1992, the provincial government initiated a co-operative biodiversity research program with funding from the Corporate Resource Inventory Initiative, the British Columbia Ministries of Forests (Research Branch), Environment, Lands, and Parks (Wildlife and Habitat Protection Branches), and Tourism and Culture (Royal B.C. Museum), and the Forest Resource Development Agreement (FRDA II).

In 1995, the Ministry of Forests Research Branch and the Ministry of Environment, Lands and Parks developed a biodiversity research and extension strategy, with the assistance of the provincial research community. This strategy was presented to Forest Renewal BC (FRBC), who provided funding for a program beginning in 1995. The goal of the extension component of this program is to extend information to scientists, resource managers, and the public through biodiversity publications. These publications are intended to increase awareness and understanding of biodiversity, promote the concepts and importance of conserving biodiversity, and communicate provincial government initiatives related to biodiversity. We hope that they will be used as tools for the conservation of British Columbia's rich, living legacy.

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ILLUSTRATED FLORA
of BRITISH COLUMBIA

Volume 6

Monocotyledons
(Acoraceae through Najadaceae)

edited by

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INTRODUCTION

This flora, projected to be in eight volumes, keys, describes and illustrates all of the flowering plants and vascular non-flowering plants, both native and naturalized, known to occur at the time of writing, within the borders of British Columbia. In part, it is a revision and expansion of *The Vascular Plants of British Columbia* (Douglas *et al.* 1989, 1990, 1991, 1994). Keys are included for all genera, species, subspecies and varieties. Family keys and maps for all taxa will appear in Volume 8. Species previously recorded for the province but excluded from this treatment appear in an annotated list in Appendix I. Thirty-one species, new to the flora since Douglas *et al.* (1994), have been added to families in Volume 6. Recent taxonomical or nomenclatural research has also resulted in additional name changes for a number of species in Volume 6. Appendix II lists these new name changes.

FORMAT

The floristic treatment is in alphabetical order by families, genera and species because most users may not be familiar with the more traditional "Englerian system". These users (e.g., foresters, wildlife biologists, park managers, naturalists, students, etc.) often require specific information about a species. Thus we have attempted to include the most frequently required information. Each entry includes the following:

Synonyms

Synonyms are given only when there are references in major or pertinent floristic treatments to a given species by another name or names. These names, for the most part, follow Kartesz and Meacham (1999), who have done an extremely thorough job of researching specific names and their authorities.

English Names

We provide an English name for each species, based mainly on names appearing most frequently in the western North American literature.

Habitat and Moisture Regime

A brief description of the habitat preference of a species is given. Moisture regime is denoted by a simple (wet - moist - mesic - dry) scale.

Vegetation Zones

The elevational limits of a species are presented using vegetation zones. The zonal system used here, unlike some of the regional zonation systems (Krajina 1965; Rowe 1959, 1972; Franklin and Dyrness 1973), has wide application in the northern hemisphere and differs only slightly from that proposed by Dansereau (1975) and Meusel *et al.* (1965) and recommended by Löve (1970) in a review of the subject. The *montane zone* includes all continuous forests in British Columbia except for the coastal lowlands and some islands, which comprise the *lowland zone*. The upper forests in southern British Columbia, included by some ecologists (e.g., Krajina 1965) in the subalpine zone, constitute the *upper montane zone* in this work. The *subalpine zone* is defined as that area above the montane zone and below the upper limit of conifers as an upright tree form (Douglas 1972). In the southern part of the province, subalpine vegetation consists of a meadow/tree-clump complex (Douglas 1971, 1972), while in the northern part of the province the subalpine zone is dominated by tall shrubs (mainly three- to four-metre *Salix*) and scattered trees (Douglas 1974, Krajina 1975). Above the subalpine zone is the *alpine zone*, where trees occur only in *krummholz* (dwarfed) form and the vegetation is extremely short (less than one metre) and commonly referred to as alpine tundra (Krajina 1969, Douglas 1972, Douglas and Bliss 1977). The *steppe zone* (Daubenmire 1970) occurs in the interior of the province and includes what is often referred to as sagebrush or grassland vegetation. This zone occurs at lower elevations in the Thompson, Okanagan, Kootenay and Columbia River valleys in southern British Columbia. Parts of the Fraser and Thompson plateaus also have grassland or steppe vegetation.

Abundance

The abundance of a species is given by a general scale: rare – infrequent – frequent – common. The rare plants are well documented in Douglas *et al.* (1998). Most of the common plants are also well known from numerous other sources. However, limited collecting or research enabled us to make only general statements about the abundance of some of the infrequent or frequent species.

Range

The general distribution of a species, both within and outside the province, is presented. Figure 1 illustrates the general areas of the province referred to in the text. Maps compiled at the Royal British Columbia Museum were extremely helpful for the more common species. Douglas *et al.* (1998) provide maps of the distributions of rare plants. Abbreviations used within the province are as follows:

E - Eastern	S - Southern
EC - Eastcentral	SC - Southcentral
N - Northern	SE - Southeastern
NE - Northeastern	SW - Southwestern
NW - Northwestern	WC - Westcentral

For ranges outside of B.C. the outer peripheries (i.e., provinces/states) of the ranges are given using the following abbreviations:

Alberta	AB	Maine	ME
British Columbia	BC	Maryland	MD
Manitoba	MB	Massachusetts	MA
New Brunswick	NB	Michigan	MI
Newfoundland	NF	Minnesota	MN
Northwest Territories	NT	Mississippi	MS
Nova Scotia	NS	Missouri	MO
Ontario	ON	Montana	MT
Prince Edward Island	PE	Nebraska	NE
Quebec	PQ	Nevada	NV
Saskatchewan	SK	New Hampshire	NH
Yukon	YT	New Jersey	NJ
		New Mexico	NM
Alabama	AL	New York	NY
Alaska	AK	North Carolina	NC
Arizona	AZ	North Dakota	ND
Arkansas	AR	Ohio	OH
California	CA	Oklahoma	OK
Colorado	CO	Oregon	OR
Connecticut	CT	Pennsylvania	PA
Delaware	DE	Rhode Island	RI
District of Columbia	DC	South Carolina	SC
Florida	FL	South Dakota	SD
Georgia	GA	Tennessee	TN
Hawaii	HI	Texas	TX
Idaho	ID	Utah	UT
Illinois	IL	Vermont	VT
Indiana	IN	Virginia	VA
Iowa	IA	Washington	WA
Kansas	KS	West Virginia	WV
Kentucky	KY	Wisconsin	WI
Louisiana	LA	Wyoming	WY
Mexico	MX		

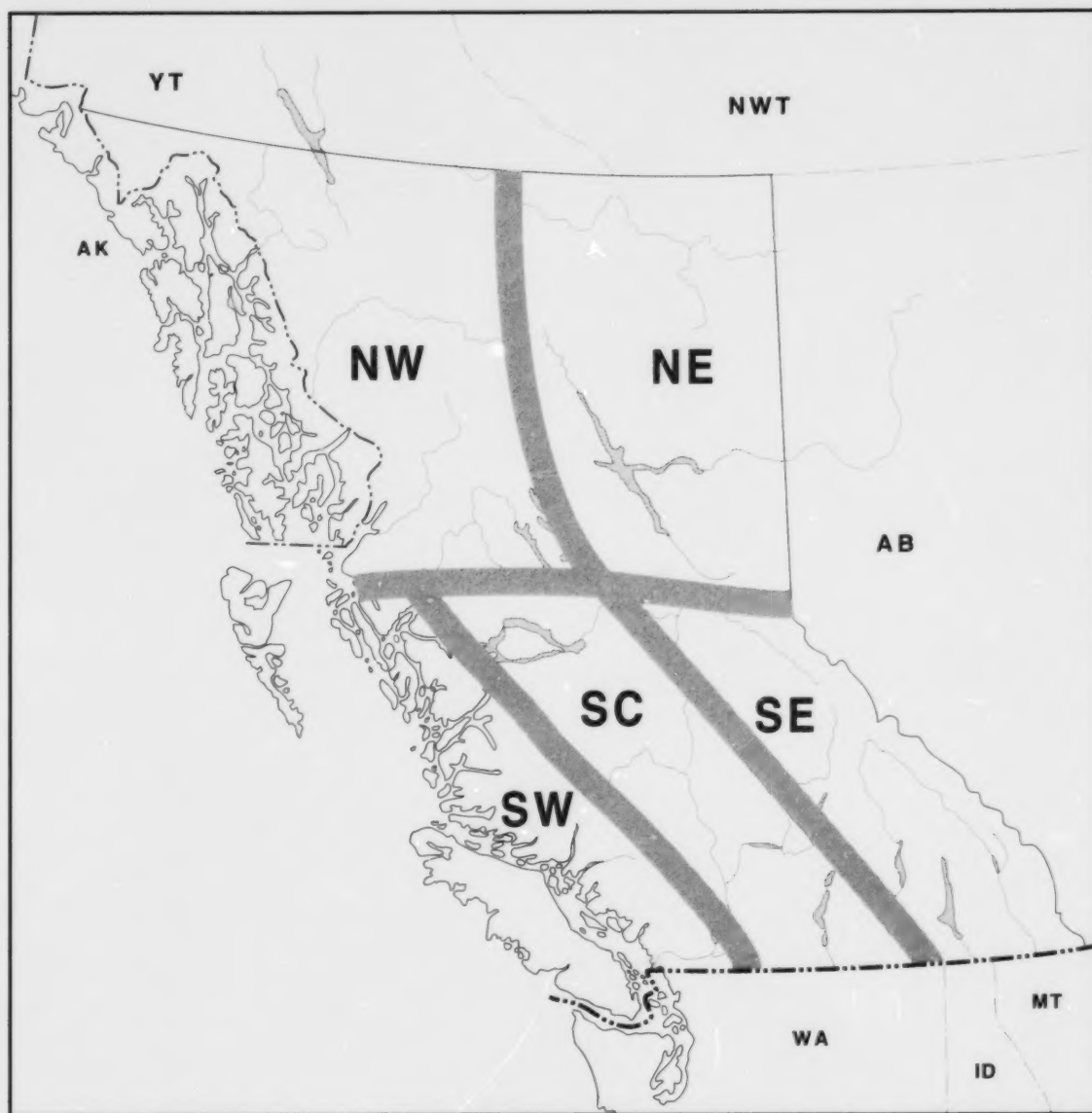


Figure 1. Geographical Regions of British Columbia.

Descriptions

Major morphological characters are given for each taxon. In most cases, technical terminology has been reduced because most of our users have a limited botanical background. All terms, both technical and simplified, appear in the glossary.

Notes

Specific items of importance or problems, especially those related to taxonomy and nomenclature, are noted. Intraspecific taxa worthy of recognition are keyed here.

We have also appended a floristic bibliography, arranged by families, for users wishing to explore the taxonomy further.

DATABASE

The present manual is based on a wealth of regional publications dating back over a hundred years. In addition, most of the species (especially the rare and infrequent ones) have been examined in various Canadian herbaria. Historically, the floristic documentation of British Columbia's flowering plants and vascular non-flowering plants began with the enumeration of the extensive collections of J. Macoun (1883-1890). This was soon followed by the botanical contributions of his son, J.M. Macoun (1889, 1894-1906). In 1915, the first provincial flora appeared (Henry 1915), treating the southern part of the province. A supplement to this work was later provided by Eastham (1947). The southern part of the province was also included in a treatment of Pacific Northwest vascular plants by Hitchcock *et al.* (1955-1969) - later edited and revised by Hitchcock and Cronquist (1973). During this same period several other major works also appeared. Boivin (1966-1967), after numerous visits to Canadian and American herbaria, produced a checklist of Canadian vascular plants. In his *Flora of Alaska and Neighboring Territories*, Hultén (1968) provided brief descriptions with range maps that, in many cases, included British Columbian species. Meanwhile, in a treatment of the Queen Charlotte Islands' vascular plants, Calder and Taylor (1968) contributed one of the few floras dealing solely with a part of British Columbia. British Columbia was again included in a regional flora of northwestern North America when Welsh (1974) treated the plants of Alaska and adjacent parts of Canada, including northern British Columbia. A literature review by Taylor and MacBryde (1977), mainly of North American works, resulted in a resource inventory of vascular plants for British Columbia. (Unfortunately, this extensive review treated several hundred erroneous citations as valid records for the province. It also ignored many herbaria records that had never been published.) Recently, a modern Canadian flora was produced by Scoggan (1978-1979). All of the province's rare or infrequent plants were examined and verified in various Canadian herbaria by Straley *et al.* (1985) and, more recently, by Douglas *et al.* (1998). Finally, the BC flora was documented, annotated and all species keyed in *The Vascular Plants of BC* (Douglas *et al.* 1989, 1990, 1991, 1994).

In addition to the major works mentioned above, there have been numerous taxonomic, floristic and related research papers dealing with British Columbia's vascular plants. Many of these are cited in the floristic bibliography by Douglas *et al.* (1983) and many are specifically referenced in this manual.

This study was supplemented by the examination of specimens in all major Canadian herbaria and some US herbaria (e.g., UIC, CAS, WTU), as well as a complete review of the pertinent literature.

Although descriptions and illustrations are provided for all of British Columbia's plant species in this manual, additional descriptions and/or illustrations may also be found in several floras (Abrams 1923-1951, Argus 1973, Cody 1996, Fernald 1950, Ferris 1960, Hickman 1993, Hitchcock *et al.* 1955-1969, Packer 1983, Porsild and Cody 1980, Tutin *et al.* 1964-1980, Welsh 1974) or in treatments of some British Columbian plant families (Brayshaw 1976, 1985, 1996a, 1996b; Douglas 1982, 1995; Szczawinski 1959, 1962; Taylor 1963, 1966, 1970, 1973, 1974a, 1974b, 1983).

TAXONOMIC CONCEPTS

We have a practical view of species limits. Therefore, species had to be readily characterized morphologically in order to produce user-friendly keys. Many of the keys were newly constructed while others were adapted for our British Columbia plants from well-tested manuals.

Wherever possible, geographically separate, or largely separate, infraspecific taxa are treated at the subspecies level, while those with sympatric ranges are treated at the varietal level. This distinction between subspecies and variety was not always possible since, with the exception of a variety of *Trillium ovatum*, we have not published any nomenclatural changes associated with the production of the manual. In this work, we have not used more than one infraspecific rank for a single species. Taxa are not recognized at the *forma* level.

ACORACEAE

ACORUS

Acorus americanus (Raf.) Raf. (*A. calamus* auct. non L.)

American sweet-flag

HABITAT/RANGE:

Shallow water in the montane zone; rare in S BC east of the Coast-Cascade Mountains; N to AK and NT, E to PQ and NB and S to ME, PA, VI, IL, IA, NE, MT, ID and WA.

DESCRIPTION:

General: Perennial aquatic herb from a thick rhizome; stems 20-60 cm tall.

Leaves: All basal, linear, erect, 40-80 cm long, 0.8-2 cm wide, the midveins offset.

Flowers: Inflorescence a dense, fleshy, linear, 5- to 10-cm long spike subtended by a leaflike bract, the bract as long as or longer than the flower stem; flowers perfect; perianth of 6, scale-like, yellow or brown sepals.

Fruits: Broadly pyramidal, hard, dry, gelatinous within.

Notes: Packer and Ringius (1984) have shown that our fertile diploid species is different than the sterile triploid Eurasian species (*A. calamus* L.) which is introduced in E North America.

ALISMATACEAE

1. Achenes borne in a single whorl on the receptacles; stamens 6 (rarely 9) *Alisma*
1. Achenes densely packed over entire surface of the receptacles; stamens 7-25 *Sagittaria*

ALISMA¹

1. Leaf blades broadly lanceolate to egg-shaped; petals usually white *A. triviale*
1. Leaf blades linear, lanceolate or narrowly lanceolate; petals pink, pinkish or white.
 2. Inflorescence overtopping the leaves; petals 4.5-6.5 mm long, pink or sometimes purplish-pink *A. lanceolatum*
 2. Inflorescence usually not overtopping the leaves; petals 2.5-3.5 mm long, pink or white *A. gramineum*

Alisma gramineum Lej. (*A. gramineum* var. *angustissimum* [DC.] Hendricks)

narrow-leaved water-plantain

HABITAT/RANGE:

Lakeshores, rivers, marshes and tidal flats in the lowland, steppe and montane zones; infrequent in S BC; circumpolar, E to S PQ and S to NY, NM, AZ and N CA; Eurasia.

DESCRIPTION:

General: Perennial aquatic herb from a corm-like stem-base and a fibrous root; stems 5-50 cm tall.

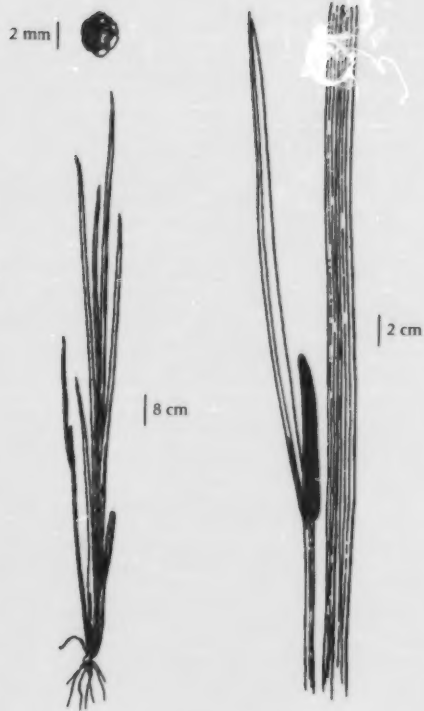
Leaves: All basal, linear, essentially bladeless to long-stalked with narrowly lanceolate blades, from submerged or floating to completely emergent, 3-40 cm long, 0.8-2 cm wide.

Flowers: Inflorescence an open, bracteate panicle of long-stalked flowers; petals pink or white, slightly longer than the sepals; sepals mostly purple-margined, 2.5-3.5 mm long.

Fruits: Achenes, 5-20, oblong, about 2 mm wide.

Notes: The taxonomy of this species is extremely complex. At present we are recognizing a single taxon. For a discussion of the nomenclatural problems in this species see Reveal (1977).

¹ Key adapted from Hitchcock (1969).



Acorus americanus



Alisma gramineum

Alisma lanceolatum With.**lance-leaved water-plantain**

HABITAT/RANGE:

Pond margins, shorelines and ditches in the lowland zone; rare in SW BC, known only from the lower Fraser Valley; introduced from Europe.

DESCRIPTION:

General: Perennial aquatic herb from a corm-like stem-base and a fibrous root; stems 80-100 cm tall.

Leaves: All basal, long-stalked, the blades lanceolate, 6-12 cm long, 1-3 cm wide.

Flowers: Inflorescence an open, bracteate panicle of long-stalked flowers; petals pink or sometimes purplish-pink, 4.5-6.5 mm long; sepals green, sometimes purplish-streaked, 2-2.2 mm long.

Fruits: Achenes, nearly globe-shaped, about 2-3 mm long.

Alisma triviale Pursh (*A. plantago-aquatica* L. var. *americanum* J.A. Schult., *A. plantago-aquatica* L. var. *triviale* [Britt., Sterns & Pogg.] Farw.)

American water-plantain

HABITAT/RANGE:

Shallow ponds, marshes and ditches in the lowland, steppe and montane zones; common in S BC south of 52° N; rare northward; E to NF and S to ME, VA, NE, NM, AZ and CA.

DESCRIPTION:

General: Perennial aquatic herb from a corm-like stem-base and a fibrous root; stems 100-120 cm tall.

Leaves: All basal, long-stalked, the blades egg-shaped to broadly lanceolate, 5-15 cm long, 1.5-10 cm wide.

Flowers: Inflorescence an open, bracteate panicle of long-stalked flowers; petals usually white, 4-6 mm long; sepals green, 2.5-4 mm long.

Fruits: Achenes, egg-shaped, 2.5-3 mm long.

Notes: Despite several monographs on *Alisma* the taxonomy and nomenclature of the above species still remains confused (see Reveal [1977]).

SAGITTARIA

1. Achenes with beaks extending at right angles to the body, the beaks 0.5-1.5 mm long; bracts of the inflorescences egg-shaped, rounded or hooded at the tips, 5-10 (15) mm long; mature male and female flower stalks of equal length *S. latifolia*
1. Achenes with beaks erect, the beaks 0.2-0.4 mm long; bracts of the inflorescences lanceolate, long-pointed at the tips, (5) 10-30 mm long; mature male flower stalks longer than the female flower stalks *S. cuneata*

Sagittaria cuneata Sheldon (*S. arifolia* Nutt. ex J. G. Smith)

arrow-leaved arrowhead

HABITAT/RANGE:

Wet ditches, ponds and lakes in the lowland, steppe and montane zones; common in BC south of 55° N and E of the Coast-Cascade Mountains, less frequent westward and northward; N to AK, YT and NT, E to Labr., NB and NS and S to ME, NY, OH, IL, TX, NM, AZ and CA.

DESCRIPTION:

General: Perennial aquatic or semi-aquatic herb from a tuber-producing rhizome; stems 20-50 cm tall.

Leaves: All basal, blades of the emergent leaves arrowhead-shaped, 1-12 cm long, long-stalked and sheathed at the base, blades of the submerged leaves lanceolate, or linear and essentially bladeless, up to 40 cm long.

Flowers: Inflorescence an open, bracteate panicle of stalked flowers, the bracts lanceolate, long-pointed at the tips, (5) 10-30 mm long; mature male flower stalks longer than the female flower stalks; petals white, 1-2 cm long; sepals 5-8 mm long.

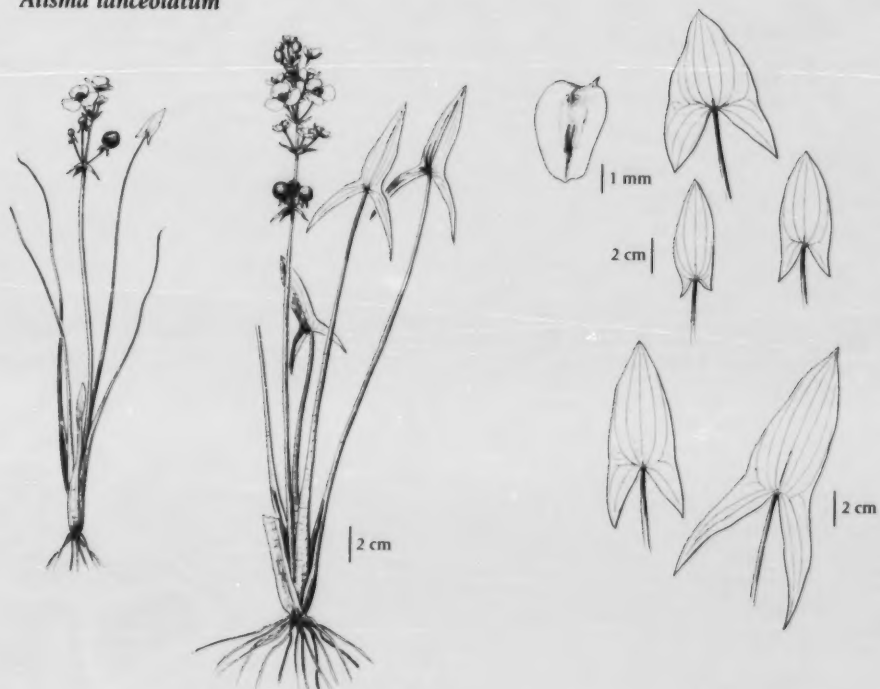
Fruits: Achenes, numerous in a globular cluster, winged, 2-2.5 mm long, the beaks erect, 0.2-0.4 mm long.



Alisma lanceolatum



Alisma triviale



Sagittaria cuneata

Sagittaria latifolia Willd. var. *latifolia* (S. *esculenta* T. J. Howell)

wapato

HABITAT/RANGE:

Wet ditches, ponds, lakeshores and marshes in the lowland, steppe and montane zones; infrequent in BC south of 56° N, absent from Queen Charlotte Islands, N Vancouver Island and adjacent coast; E to PQ, NB and NS and S to ME, PA, NC, FL, MS, TX, NM, AZ and CA; N South America, HI.

DESCRIPTION:

General: Perennial aquatic or semi-aquatic herb from a tuber-producing rhizome; stems 20-50 (90) cm tall.

Leaves: All basal, blades of the emergent leaves arrowhead-shaped, 5-25 cm long, long-stalked and sheathed at the base, blades of the submerged leaves lanceolate, or linear and essentially bladeless, up to 80 cm long.

Flowers: Inflorescence an open, bracteate panicle of stalked flowers, the bracts egg-shaped, rounded or hooded at the tips, 5-10 (15) mm long; mature male and female flower stalks of equal length; petals white, 1-2 cm long; sepals 5-8 mm long.

Fruits: Achenes, numerous in a globular cluster, winged, 2-3.5 mm long, sharp-beaked, the beaks extending at right angles to the body, 0.5-1.5 mm long.

ARACEAE

1. Leaves net-veined, lanceolate to egg-shaped; spathes yellow *Lysichiton*
1. Leaves pinnately closely parallel-veined, heart-shaped; spathes white *Calla*

CALLA

Calla palustris L.

wild calla; water arum

HABITAT/RANGE:

Swamps, marshes and lakeshores in the montane zone; locally frequent in BC north of 52° N and E of the Coast Mountains, rare in SC BC; circumpolar, N to AK, YT and NT, E to NF and S to ME, PA, IN, IL, IA and ND; Eurasia.

DESCRIPTION:

General: Perennial aquatic herb from a long, creeping rhizome; stems solitary, 10-20 cm tall.

Leaves: All basal, blades egg-shaped to broadly heart-shaped, entire, 5-12 cm long, 4-11 cm wide, long-stalked.

Flowers: Inflorescence of numerous, densely packed, perfect (or sometimes the upper male) flowers in a cylindric to ellipsoid spike 1-3 cm long, the spike subtended by a bract (spathe) similar to the leaves in shape but white and slightly smaller; perianth absent; ovaries 1-celled.

Fruits: Berry-like, egg-shaped, red, 5 mm long; seeds 6 to 8.



Sagittaria latifolia var. *latifolia*



Calla palustris

LYSICHITON

Lysichiton americanus Hult. & St. John

skunk cabbage

HABITAT/RANGE:

Swamps, wet ditches and moist forests in the lowland and montane zones; common in S BC west of the Coast-Cascade Mountains, less frequent elsewhere in BC south of 56° N; N to SE AK and S to MT, ID and CA.

DESCRIPTION:

General: Perennial semi-aquatic or terrestrial herb from a short, thick rhizome and fibrous roots; stems several, 30-70 cm tall.

Leaves: All basal, blades egg-shaped to broadly lanceolate, entire, 30-150 cm long, 10-70 cm wide, short-stalked.

Flowers: Inflorescence of numerous, densely packed, perfect flowers in a cylindric spike 7-12 cm long, the spike on a 30- to 50-cm long stalk and subtended by a yellowish bract similar to the leaves in shape but much smaller; perianth 4-lobed; ovaries 2-celled.

Fruits: Berry-like, broadly egg-shaped, greenish to reddish, 6 mm long; seeds 1 or 2.

BUTOMACEAE

BUTOMUS

Butomus umbellatus L.

flowering-rush

HABITAT/RANGE:

Marshes and lakeshores; rare in SW BC, known only from Hatzic Lake; introduced from Eurasia.

DESCRIPTION:

General: Perennial aquatic herb from a stout rhizome; stems solitary, 100-150 cm tall.

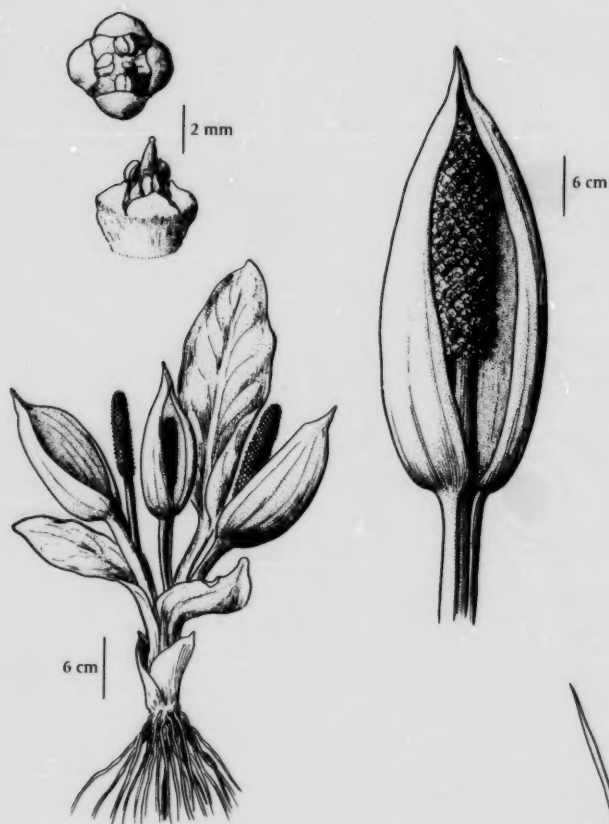
Leaves: All basal, erect or floating in deep water, linear, twisted, 50-100 cm long, 0.5-1 cm wide.

Flowers: Inflorescence of numerous flowers on slender stalks in an umbel; perianth 2-2.5 cm wide, long-stalked, the stalks 5-10 cm long, subtended by narrowly triangular bracts; petals 3, pink, more deeply coloured on the outside; sepals 3, greenish outside along the midribs, nearly as long as the petals; stamens 9.

Fruits: Follicles, 6, beaked, about 1 cm long; seeds straight, lined.

CYPERACEAE

1. Flowers unisexual; achenes enclosed in flask-shaped perigynia, as well as subtended by open scales.
 2. Perigynia open, with unsealed margins, merely wrapped around the achenes *Kobresia*
 2. Perigynia closed, except at the tips *Carex*
1. Flowers bisexual; achenes not enclosed in perigynia.
 3. Scales of spikes in 2 opposing rows.
 4. Perianth bristles 6 to 9; leaves numerous, equally distributed on the stems, the upper ones bearing axillary inflorescences *Dulichium*
 4. Perianth bristles absent; leaves fewer, mostly basal; inflorescences terminal *Cyperus*
 3. Scales of spikes spirally arranged.
 5. Spikes with 1 (rarely 2) achene *Rhynchospora*
 5. Spikes with several to many achenes.



Lysichiton americanus



Butomus umbellatus

6. Styles thickened toward the bases, these thickenings forming persistent and conspicuous tubercles on the achenes *Eleocharis*
6. Styles not thickened, although achenes may be abruptly sharp-pointed.
 7. Achenes subtended by inconspicuous scales in addition to the ordinary scales of the spikes *Lipocarpus*
 7. Achenes subtended by 1 to many perianth bristles (or these rarely obsolete) in addition to the ordinary scales of the spikes.
 8. Perianth bristles 10 or more *Eriophorum*
 8. Perianth bristles 8 or fewer.
 9. Spikes with subtending, leafy bracts.
 10. Plants annuals or perennials; perianth bristles absent; achenes more or less abruptly sharp-pointed.
 11. Involucral bracts more than 2 cm long *Schoenoplectus (saximontanus)*
 11. Involucral bracts less than 2 cm long *Isolepis*
 10. Plants perennials; perianth bristles present or achenes abruptly sharp-pointed, or both.
 12. Involucral bracts solitary, not leaflike or spreading, appearing as an extension of the stem *Schoenoplectus*
 12. Involucral bracts 2 or more, some of them leaflike and more or less spreading.
 13. Involucral bracts both leaflike and scalelike *Amphiscirpus*
 13. Involucral bracts all leaflike.
 14. Spikes 1.2-2.5 cm long; scales hairy *Bolboschoenus*
 14. Spikes 0.3-0.8 cm long; scales smooth *Scirpus*
 9. Spikes with lower scales slightly modified, not leafy.
 15. Lower scales of the spikes short, not more than 1/2 as long as the spikes *Eleocharis*
 15. Lower scales of the spikes long, nearly as long or longer than the spikes *Trichophorum*

AMPHISCIRPUS

Amphiscirpus nevadensis (S. Wats.) Oteng-Yeboah (*Scirpus nevadensis* S. Wats.)

Nevada bulrush; Nevada clubrush

HABITAT/RANGE:

Wet, usually alkaline, meadows in the steppe and montane zones; infrequent in SC BC; E to MB and S to NE, CO, UT, NV and CA; S America.

DESCRIPTION:

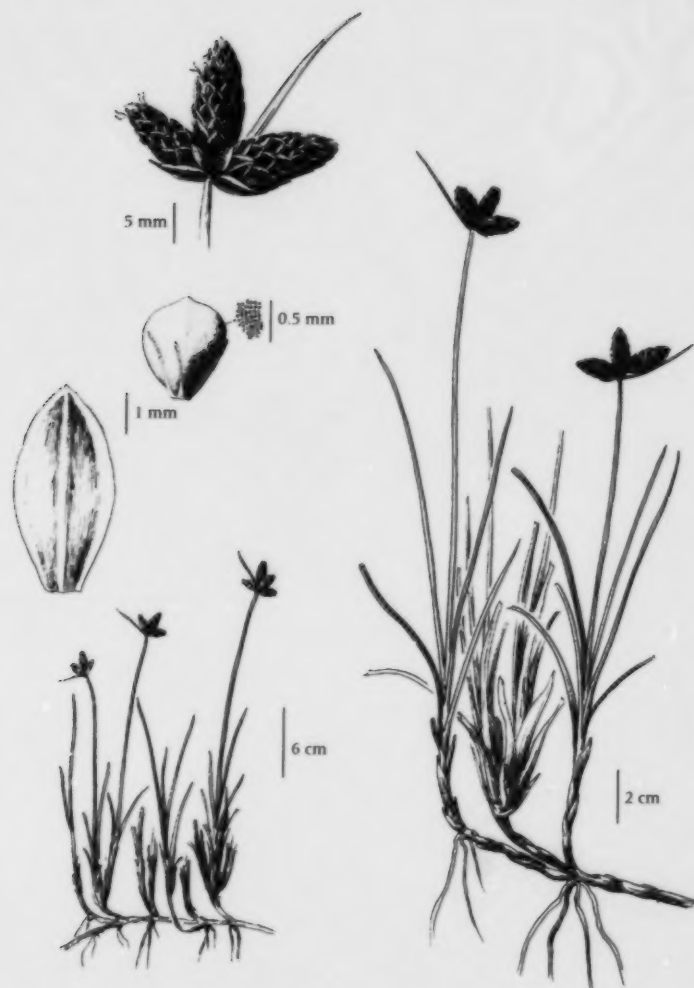
General: Perennial herb from rhizomes; stems scattered or in small tufts, circular in cross-section, tapered, tough and wiry, emergent for most of their length when growing in water, 10-40 cm tall.

Leaves: Several, clustered near the base; sheaths persistent; blades firm, deeply grooved to thick and flat, mostly 1-2 mm wide, up to 20 cm long, often much shorter, the lowest ones sometimes reduced to scales.

Flowers: Spikes (1) 2 to 10, terminal, 1-2 cm long, in compact, unstalked clusters; involucral bracts several, one or more of them short, reddish-tinged, resembling enlarged scales, the principal, longest ones slender, stiff, green, leaflike, 1.5-7 cm long, more or less spreading, sometimes resembling extensions of the stems, but more often diverging at an angle.

Fruits: Scales numerous, shining brown, largely translucent except for the paler, firm midribs, which may be exerted beyond the scales into short, sharp, slender points, not notched at the tips; perianth bristles 1 to 3 (4), slender and much reduced, finely-barbed backwards, rarely surpassing the middle of the achenes, generally unequal; styles abruptly deciduous; achenes plano-convex, pale, firm-walled, about 2 mm long, the tips not sharp-pointed.

Notes: The Eastham (1947) collection from the Fraser River delta was probably an introduction on sand dredgings.



Amphiscirpus nevadensis

BOLBOSCHOENUS

1. Stigmas 2; perianth bristles poorly developed, or often lacking, but if present, up to about half as long as the achenes; sheaths reaching to middle of the stems or below *B. maritimus*
1. Stigmas 3; perianth bristles well developed, often equalling the achenes; sheaths reaching well above middle of the stems *B. fluviatilis*

***Bolboschoenus fluviatilis* (Torr.) Soják (*Scirpus fluviatilis* [Torr.] A. Gray)**

river bulrush

HABITAT/RANGE:

Marshes, streamsides and lakeshores in the lowland and steppe zones; rare in SW and SC BC, known only from Osoyoos Lake and Hesquiat on Vancouver Island; amphiberingian, E to PQ and NB and S to ME, MA, PA, VA, AL, MO, OK, NM, AZ and, CA; E Asia.

DESCRIPTION:

General: Perennial herb from rhizomes and also tubers from the stem-base, the tubers 2.5-3 cm thick; stems 100-200 cm tall.

Leaves: Leaves several, well-developed; sheaths reaching well above the middle of the stems; blades flat or nearly so, 6-15 (18) mm wide, up to 40 cm long.

Flowers: Spikes mostly 10 to 50, terminal, brown, 1.2-2.5 cm long, 6-10 mm wide, egg-shaped to spindle-shaped, pointed or nearly so, several of them in compact, terminal clusters, the others borne singly or in small clusters at the ends of several mostly lax branches that are 3-7 cm long; involucre bracts several, conspicuous, elongate, very unequal, some of them leaflike and much longer than the inflorescence.

Fruits: Scales numerous, brown, minutely stiff short-hairy on the backs, awned, the awns short, more or less flexuous from tapering or notched tips; perianth bristles well-developed, stiff, minutely and finely-barbed backwards, variable, often equalling the achenes; stigmas 3; achenes 3-angled, dull grey-brown, mostly 3.5-5 mm long, half as wide, abruptly sharp-pointed.

***Bolboschoenus maritimus* (L.) Palla var. *paludosus* (A. Nels.) Koyama (*Scirpus maritimus* L. var. *paludosus* [A. Nels.] Kükenth., *S. paludosus* A. Nels., *S. robustus* auct. non Pursh)**

seacoast bulrush; alkali bulrush

HABITAT/RANGE:

Marshes, swamps, saline and alkaline ponds, and wet meadows in the lowland and steppe zones; frequent in BC south of 53° N; N to AK, YT and NT, E to NF and S to ME, MA, PA, VA, MI, LA, TX, NM, AZ and CA.

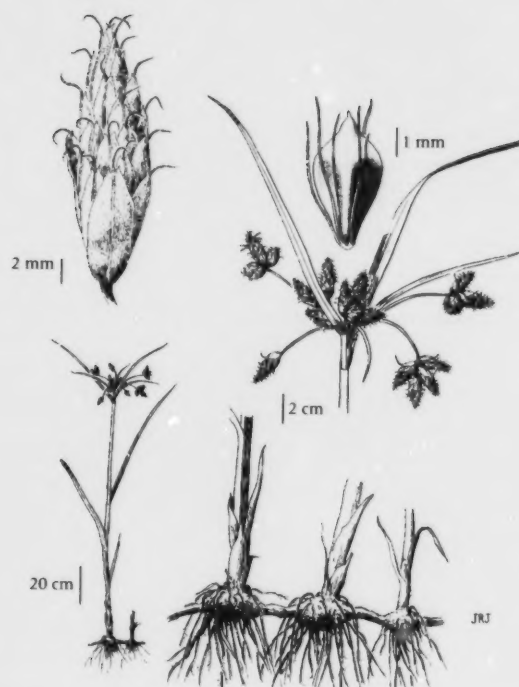
DESCRIPTION:

General: Perennial herb from rhizomes and also tubers from the stem-base, the tubers 1.5-2 cm thick; stems 50-150 cm tall.

Leaves: Usually several, well-developed; sheaths reaching to middle of the stems or below, cross-wrinkled; blades elongate, flat or nearly so, up to about 1 cm wide, up to 40 cm long.

Flowers: Spikes 3 to 20 or more, 1.2-2 cm long, 6-10 mm wide, egg-shaped to cylindrical, usually blunt, all unstalked in compact terminal clusters, or the principal clusters somewhat surpassed by one or more short stalks bearing each subsidiary cluster; involucre bracts several, very unequal, 2 to 4 of them more or less elongate, green and leaflike, surpassing the inflorescence, one larger than the others.

Fruits: Scales numerous, straw-coloured, sometimes darker brown (especially along the coast), about 1.5 mm long, thin and more or less translucent, minutely stiff short-hairy on the backs, awned, the awns curved, 1-3 mm long from notched tips; perianth bristles 2 to 6, poorly developed or often lacking, but if present, minutely and finely-barbed backwards, up to about half as long as the achenes; stigmas 2; achenes lens-shaped, pale or brown to black, glossy, 2.5-4 mm long, abruptly sharp-pointed.

*Bolboschoenus fluviatilis**Bolboschoenus maritimus* var. *paludosus*

CAREX²

1. Spikes solitary, terminal GROUP A
1. Spikes more than one, sometimes congested into a head-like inflorescence.
 2. Spikes all alike, usually with both male and female flowers or with male and female flowers on separate plants; all spikes unstalked GROUP B (page 19)
 2. Spikes differentiated into terminal male spike and lateral female spikes; if terminal spike with both male and female flowers, then the lateral spikes with noticeable stalks GROUP C (page 24)

GROUP A

Sedges with a single terminal spike.

1. Male and female flowers on separate plants; spikes with either male or female flowers.
 2. Perigynia smooth, at maturity reflexed; stigmas 2; leaves channeled, less than 1 mm wide *C. gynocrates*
 2. Perigynia hairy, at maturity not reflexed; stigmas 3; leaves flat, at least 1 mm wide *C. scirpoidea*
1. Male and female flowers on the same plant; spikes with both male and female flowers.
 3. Lower female scales leaflike, much longer than the perigynia and even longer than the spikes.
 4. Perigynia 5-6 mm long, the upper 1/3 of the bodies empty, the beaks stout, about 2 mm long, not finely toothed; leaves deep green, flat *C. backii*
 4. Perigynia 4-5 mm long, the upper part of the bodies filled by the achene, the beaks conic, about 1 mm long, slightly fine-toothed; leaves glaucous-green, the margins rolled-under *C. saximontana*
 3. Lower female scales not leaflike, at most slightly longer than the perigynia.
 5. Mature perigynia reflexed, the scales deciduous.
 6. Perigynia egg-shaped to lanceolate, 3-4 mm long.
 7. Leaves flat, 1.5-2.5 mm wide; stigmas 3 *C. nigricans*
 7. Leaves cylindrical or in-rolled, less than 1 mm wide; stigmas 2 *C. gynocrates*
 6. Perigynia narrowly lanceolate, 4-7 mm long.
 8. Perigynia 6-7 mm long, without nerves; rachillas not extending from the perigynia; stems triangular, rough, with the lowest leaves reduced to scales *C. pauciflora*
 8. Perigynia 3-5.5 mm long, with a few nerves; rachillas conspicuously extending from the perigynia; stems rounded, smooth, with the lowest leaves well-developed *C. microglochin*
 5. Mature perigynia not reflexed, the scales persistent.
 9. Perigynia rounded at the tips, beakless *C. leptalea*
 9. Perigynia not rounded at the tips, contracted or tapered into beaks.
 10. Plants rhizomatous.
 11. Perigynia egg-shaped or lanceolate, 4 mm long or longer.
 12. Perigynia 5 or more per spike, 4 mm long, broadest at or below the middle, nerved; rhizomes light greenish-brown; plants of wet montane meadows in coastal BC *C. anthoxanthea*

² Contributed by G. W. Douglas and A. Ceska. Key by A. Ceska.

- 12. Perigynia 1 to 3 per spike, 5-7 mm long, broadest above the middle, 2-ribbed; rhizomes reddish-brown; plants of dry open forests in the interior BC *C. geyeri*
- 11. Perigynia round to egg-shaped, up to 4 mm long.
 - 13. Female scales about 1/2 as long as the perigynia, pointed to short-awned; perigynia leathery; rachillas well-developed *C. obtusata*
 - 13. Female scales about as long as the perigynia, blunt; perigynia membranaceous; rachillas absent *C. rupestris*
- 10. Plants tufted.
 - 14. Perigynia hairy or short-hairy, at least on the beaks *C. filifolia*
 - 14. Perigynia smooth.
 - 15. Spikes rounded at the bases; perigynia egg-shaped, rounded at the bases, unstalked.
 - 16. Spikes globe-shaped, 4-10 mm long; stigmas 2; perigynia not conspicuously inflated, abruptly contracted into short beaks *C. capitata*
 - 16. Spikes elongated, 10-15 mm long; stigmas 3; perigynia strongly inflated, continuously tapering into minute beaks *C. engelmannii*
 - 15. Spikes tapering towards the bases; perigynia lanceolate or oblanceolate with short stalks.
 - 17. Plants densely tufted with conspicuous remnants of old sheaths without blades; spikes egg-shaped, less than 10 mm long; rachillas present *C. nardina*
 - 17. Plants loosely tufted without remnants of old sheaths; spikes elliptical to linear, usually more than 10 mm long; rachillas absent.
 - 18. Male part of the spikes consisting of several flowers and forming less than 1/5 of the spikes; perigynia and scales dark-tinged; beaks smooth on the sides; spikes dense, egg-shaped to lanceolate, 2-4 times longer than wide *C. pyrenaica*
 - 18. Male part of the spikes conspicuous, forming 1/5-1/3 of the spikes; perigynia and scales light brown; beaks rough with scattered spines on the sides; spikes narrowly lanceolate, more than 4 times longer than wide *C. circinata*

GROUP B

Sedges with several spikes.
Each spike with both male and female flowers.

- 1. Perigynia large, 10-15 mm long; beaks 5-7 mm long; stigmas 3 *C. macrocephala*
- 1. Perigynia smaller than 7 mm long; beaks less than 3 mm long or beakless; stigmas 2.
 - 2. Male flowers at the upper part of each individual spike (in mature plants look for remnants of filaments or for empty scales) or with male and female flowers on separate plants.
 - 3. Stems arising singly or few together from long creeping rhizomes.
 - 4. Stems branched, becoming decumbent and sending up new stems from the axils of the old leaves *C. chordorrhiza*
 - 4. Stems unbranched.
 - 5. Perigynia wing-margined; beaks pointed and bidentate *C. siccata*
 - 5. Perigynia not wing-margined; beaks obliquely cut or sometimes bidentate.
 - 6. Spikes densely aggregated into globe-shaped or egg-shaped heads appearing like one spike *C. incurviformis*

6. Spikes not densely aggregated, at least the lower ones distinct.
 7. Spikes few-flowered, with 2 to 3 perigynia; perigynia with inconspicuous beaks *C. disperma*
 7. Spikes with more than 3 perigynia per spike; perigynia with evident beaks.
 8. Upper sheaths green-lined below; perigynia with beaks sharply bidentate, thin-margined above *C. sartwellii*
 8. Upper sheaths translucent below; perigynia with beaks not sharply bidentate, perigynia not thin-margined above.
 9. Stems angled or triangular, the angles rounded, smooth; leaves narrowly in-rolled or grooved.
 10. Perigynia long-beaked; styles elongate *C. douglasii*
 10. Perigynia short-beaked; styles short *C. duriuscula*
 9. Stems sharply triangular, rough above; leaves flat or folded.
 11. Perigynia chestnut-coloured, unequally biconvex; beaks 1/5-1/3 of the bodies; rhizomes slender; lower sheaths light brownish *C. simulata*
 11. Perigynia blackish in age, plano-convex; beaks 1/3-1/2 of the bodies; rhizomes stout; lower sheaths dark brown or black.
 12. Scales very dark, chestnut-brown, shining; perigynia 3-4.5 mm long, polished, scarcely translucent at the orifice; coastal beaches *C. pansa*
 12. Scales lighter coloured, dull; perigynia 3-4 mm long, dull, strongly translucent at the orifice; interior meadows *C. praegracilis*
 3. Stems densely to loosely tufted, rhizome not long-creeping.
 13. Perigynia with bodies tapering evenly into beaks; stems weakly cellular and flattened in drying; leaves 5-10 mm wide *C. stipata*
 13. Perigynia with bodies abruptly contracted into beaks; stems not weakly cellular and not flattening in drying; leaves 1-5 mm wide.
 14. Spikes usually fewer than 10; sheaths not red-dotted below.
 15. Beaks of the perigynia shallowly cleft, not bidentate; spikes form an interrupted, elongated inflorescence *C. vallicola*
 15. Beaks of the perigynia bidentate; at least a few of the uppermost spikes aggregated into heads.
 16. Spikes closely aggregated into dense, egg-shaped to cylindrical heads; scales shorter than the perigynia; bracts of the lowermost spikes inconspicuous, short *C. hoodii*
 16. Lower spikes separated from the small terminal head; scales about the same length as the perigynia or longer; bracts of the lowermost spikes conspicuous, several times longer than the spikes *C. tumulicola*
 14. Spikes more than 10; sheaths often red-dotted below, at least at the mouths.
 17. Perigynia yellowish or straw-coloured, or in age, black, plano-convex; sheaths usually cross-wrinkled below; the lowermost spikes with conspicuous bristlelike bracts, much longer than the spikes *C. vulpinoidea*
 17. Perigynia brownish, thick, plano-convex or unequally biconvex; sheaths not cross-wrinkled below; bracts absent or at most, as long as the spikes.
 18. Sheaths not copper-tinged at the mouths; heads little interrupted; perigynia 2-3 mm long, shining, not concealed by the scales *C. diandra*

18. Sheaths copper-tinged at the mouths; heads interrupted; perigynia 2.5-4 mm long, nearly concealed by the scales.
 19. Inflorescence branched; leaves 2.5-6 mm wide; ligules conspicuous, longer than wide; sheaths concave at the mouths and only moderately prolonged beyond the base of blades; perigynia 3-4 mm long, shiny *C. cusickii*
 19. Inflorescence not branched; leaves 1-3 mm wide; ligules very short; sheaths convex and conspicuously prolonged beyond the base of the blades; perigynia 2.5-3 mm long, dull *C. prairea*
2. Male flowers at the base of each individual spike (in mature plants look for remnants of filaments or for empty scales).
 20. Perigynia with distinct wings, at least at the upper part of the bodies and beaks, the lower walls of the perigynia without spongy tissue; stems hollow.
 21. Bracts leaflike, conspicuously exceeding the heads.
 22. Perigynia very narrow, 4.8-6.5 mm long and 0.8-1 mm wide, 5-7 times as long as wide *C. sychnocephala*
 22. Perigynia 3-4.5 mm long and 0.9-1.8 mm wide, 2-4.5 times as long as wide.
 23. Perigynia with beaks translucent at the orifice, obliquely cleft, shallowly bidentate; lowest bract not appearing like a continuation of the stem *C. athrostachya*
 23. Perigynia with beaks not translucent at the orifice, bidentate; lowest bract appearing like a continuation of the stem *C. unilateralis*
 21. Bracts neither leaflike nor conspicuously exceeding the heads.
 24. Perigynia with beaks slender and circular in cross-section, tapered and scarcely margined at the tips, the upper 1-2 mm little if at all lined with small-bristled teeth, obliquely cut above, at times becoming more or less bidentate.
 25. Perigynia 6-8 mm long; scales light reddish-brown; spikes more or less aggregated into an elongated head *C. petasata*
 25. Perigynia 2.5-6 mm long, if longer, the scales very dark-coloured or spikes in a flexuous or necklace-like inflorescence.
 26. Scales shorter than the perigynia and noticeably narrower above, largely exposing top of the perigynia.
 27. Achenes filling more than 1/2 of the perigynia.
 28. Perigynia 2.5-3.5 mm long; spikes closely aggregated into a small dark brown head *C. illota*
 28. Perigynia 3.5-6 mm long; spikes loosely aggregated into a green to dark brown head.
 29. Perigynia plump, biconvex; achenes filling about 3/4 of the perigynia; anthers about 1.5 mm long *C. preslii*
 29. Perigynia plano-convex; achenes filling 1/2 to 2/3 of the perigynia; anthers 0.7-1 mm long.
 30. Scales with broad translucent margins; perigynia wings copper-coloured, darker than the bodies *C. macloviana*
 30. Scales with narrow, translucent margins or dark throughout; perigynia wings the same colour as the rest of the bodies *C. pachystachya*
 27. Achenes filling less than 1/2 of the perigynia.
 31. Perigynia 4.5-6 mm long; spikes forming a triangular head, the head black *C. haydeniana*

- 31. Perigynia 3-4.5 mm long; spikes forming an egg-shaped head, the head brown .. *C. microptera*
- 26. Scales about the length of the perigynia and nearly the same width above, concealing the perigynia above or nearly so.
 - 32. Perigynia with beaks not white-translucent at the tips *C. tracyi*
 - 32. Perigynia with beaks strongly white-translucent at the tips.
 - 33. Stems 10-30 cm tall; female scales reddish-brown with narrow translucent margins; spikes 4-6 mm long *C. phaeocephala*
 - 33. Stems 20-80 cm tall; female scales light brown with broad, silvery-white translucent margins; spikes usually 6-16 mm long *C. praticola*
- 24. Perigynia with beaks flattened and margined at the tips, lined with small-bristled teeth to the tips, often strongly bidentate as well as obliquely cut above.
 - 34. Scales about as long as the perigynia and nearly the same width above, concealing the perigynia or very nearly so.
 - 35. Scales pale or silver; scales and perigynia neatly appressed; perigynia straw-coloured, golden-tinged at the bases *C. xerantica*
 - 35. Scales brownish; scales and perigynia curving upward in maturity; perigynia green, turning brown when ripe.
 - 36. Inflorescence with spikes well separated; spikes often narrowed down at the bases into prominent portions with male flowers; bracts poorly developed *C. aenea*
 - 36. Inflorescence with spikes densely bunched at the stem tips, rounded at the bases without conspicuous portions with male flowers; lowest bract developed, often surpassing the head *C. adusta*
 - 34. Scales shorter than the perigynia and noticeably narrower above, largely exposing top of the perigynia.
 - 37. Sheaths (at least of the uppermost leaves) green *C. feta*
 - 37. Sheaths white-translucent below.
 - 38. Perigynia awl-like to narrowly egg-shaped or lanceolate, 3-4 times as long as wide.
 - 39. Spikes more or less regularly spaced, forming a prolonged inflorescence *C. tribuloides*
 - 39. Spikes clustered forming a loose, terminal head.
 - 40. Perigynia 3-4 mm long, lanceolate to awl-like, where distended by the achenes, 0.8-1.2 mm wide, the margins nearly obsolete at the bases *C. crawfordii*
 - 40. Perigynia 4-7 mm long, lanceolate to narrowly egg-shaped, 1.2-2.6 mm wide, noticeably wing-margined to the bases *C. scoparia*
 - 38. Perigynia egg-shaped to lanceolate or broader, at most twice as long as wide.
 - 41. Perigynia 3-5 mm long, 2-3.5 mm wide, the bodies nearly globe- to kidney-shaped *C. brevior*
 - 41. Perigynia 3-4.5 mm long, 1.5-2 mm wide, the bodies narrowly to broadly egg-shaped.
 - 42. Perigynia 3-3.5 mm long, brownish at maturity (dull green when young); spikes closely aggregated, blunt or rounded at the bases *C. bebbii*
 - 42. Perigynia 2.8-4 mm long, straw-coloured at maturity (green when young); at least the lowest two spikes separated, the spikes short club-shaped at the bases *C. tenera*

20. Perigynia at most thin-edged, without wings, the lower part of the bodies spongy thickened; stem solid.
43. Perigynia not minutely whitish-dotted.
44. Perigynia appressed; perigynia walls thin, papery, breaking easily and exposing the achenes *C. deweyana*
44. Perigynia spreading or ascending at maturity; perigynia walls thicker, not breaking easily and exposing the achenes.
45. Beaks smooth or nearly so, the perigynia bodies broadest near the middle; spikes remote, the lowest one with a bract much longer than the spikes *C. laeviculmis*
45. Beaks lined with small-bristled teeth, the perigynia bodies broadest near the bases; spikes close together in the upper part of the stem, the bract short or none.
46. Perigynia small, 2.25-3.25 mm long, the beaks 1/4 to 1/3 length of the bodies, very shallowly bidentate *C. interior*
46. Perigynia 2.75-4.75 mm long, the beaks more than 1/3 of the bodies, sharply bidentate *C. echinata*
43. Perigynia minutely whitish-dotted.
47. Plants with stolons and rhizomes, forming loose mats or growing as single stems.
48. Spikes with fewer than 4 perigynia, widely separated on the stem.
49. Perigynia unequally biconvex; spikes essentially with the male flowers above the female flowers; lowest bract short or none *C. disperma*
49. Perigynia plano-convex; spikes with the female flowers above the male flowers; lowest bract bristle-form, many times exceeding the spikes *C. trisperma*
48. Spikes with 4 to 10 perigynia, the lower spikes sometimes remote, the upper close together, or in a terminal head.
50. Spikes closely aggregated, forming an egg-shaped or nearly globe-shaped head; perigynia faintly nerved *C. tenuiflora*
50. Spikes remote; perigynia finely nerved *C. loliacea*
47. Plants tufted.
51. Perigynia egg-shaped, broadest near the bases; the beaks conspicuous, about 0.7 mm long, strongly lined with small-bristled teeth *C. arcta*
51. Perigynia elliptical, broadest near the middle, the beaks less than 0.5 mm, smooth or moderately lined with small-bristled teeth.
52. Perigynia with conspicuous sharp beaks and a distinctly translucent-margined groove towards the tip.
53. Spikes 3 to 9, at least the lower ones remote *C. brunnescens*
53. Spikes 1 to 4 (6), close together.
54. Stems smooth or nearly so below the head; perigynia brownish-yellow, the beaks translucent at the tips *C. lachenalii*
54. Stems very rough below the head; perigynia bluish-green or brown in age, the beaks reddish-brown at the tips *C. heleonastes*
52. Perigynia beakless or with a short blunt beak and without a translucent-margined groove.
55. Lateral spikes female, the terminal spike with both sexes, the female flowers above the male flowers, longer and wider than the lateral spikes *C. glareosa*

55. Lateral spikes with both sexes, the female flowers above the male flowers, similar in shape and size to the terminal spike.
56. Perigynia 1.5-2 mm long with 5 to 7 fine nerves on each side *C. lapponica*
56. Perigynia 2.3-3 mm long with 6 to 10 fine nerves on each side.
57. Scales smaller than the perigynia, the perigynia exposed, conspicuous in the spikes; lower spikes remote *C. canescens*
57. Scales enveloping the perigynia towards the bases, the perigynia concealed; spikes all closely approximate *C. arctiformis*

GROUP C

Sedges with terminal male and lateral female spikes

1. Stigmas 2; achenes lens-shaped.
 2. Lowest bract sheathing; spikes few-flowered; perigynia powdery, golden yellow or brownish at maturity.
 3. Lowest bract slightly exceeding the stem, short-sheathing; terminal spike with female flowers above male flowers, with at least 3/4 of the flowers female *C. bicolor*
 3. Lowest bract strongly exceeding the stem, long-sheathing; terminal spike male or with both sexes, female flowers above male flowers, with fewer than 3/4 of the flowers female.
 4. Mature perigynia golden yellow or brownish, coarsely ribbed; scales widely spreading *C. aurea*
 4. Mature perigynia whitish-powdery, obscurely ribbed; scales appressed *C. garberi*
 2. Lowest bract usually sheathless; spikes many-flowered; perigynia not powdery, golden yellow or brownish at maturity.
 5. Perigynia lustrous, over 3.5 mm long; achenes continuous with the styles *C. saxatilis*
 5. Perigynia not lustrous, up to 3.5 mm long; achenes jointed with the styles.
 6. Perigynia conspicuously nerved or ribbed.
 7. Plants rhizomatous, growing in loose stands *C. nigra*
 7. Plants tufted, growing in clumps *C. lenticularis*
 6. Perigynia nerveless below or with obscure nerves.
 8. Perigynia leathery; achenes often constricted in the middle.
 9. Female spikes erect on stiff stalks arising close together; basal sheaths purplish-black, breaking into threads in a feather-like pattern *C. obnupta*
 9. Female spikes drooping on slender elongate stalks, well spaced along the upper part of the stem; basal sheaths dull brown, not breaking into threads *C. lyngbyei*
 8. Perigynia firm-papery; achenes not constricted in the middle.
 10. Perigynia broadly elliptical, olive-green, 1.5-2 mm long *C. interrupta*
 10. Perigynia narrowly elliptical to broadly egg-shaped, light green to straw-coloured, 2.5-3.5 mm long.
 11. Lowest bract shorter than the inflorescence; female scales with obsolete or slender midribs.
 12. Female spikes slender, linear to narrowly egg-shaped, 2-4 (6) mm wide, the lowest stalked; perigynia plano-convex, appressed *C. bigelowii*

- 12. Female spikes stout, egg-shaped, 6-10 mm wide, more or less unstalked; perigynia soon turgid, spreading *C. scopulorum*
- 11. Lowest bract usually equalling or exceeding the inflorescence; female scales with slender midribs or broader, light-coloured centres.
 - 13. Perigynia inflated; spikes blunt at the bases *C. aperta*
 - 13. Perigynia flattened; spikes wedge-shaped at the bases.
 - 14. Sheaths usually strongly dark-coloured below at the mouth; lower female spikes nodding on long stalks; female scales whitened at the tips, especially in age *C. sitchensis*
 - 14. Sheaths not coloured below at the mouth; lower female spikes not nodding; female scales not whitened at the tips *C. aquatilis*
- 1. Stigmas 3, achenes 3-angled or more or less round in cross-section.
 - 15. Perigynia hairy.
 - 16. Beaks of perigynia bidentate.
 - 17. Lowest bract with a long sheath.
 - 18. Terminal spike with all male flowers or with male flowers above the female flowers; plants with slender horizontal rhizomes *C. petricosa*
 - 18. Terminal spike male or with the female flowers above the male flowers; plants densely tufted or with short ascending stolons.
 - 19. Leaves less than 3 mm wide; perigynia not more than 1 mm wide; alpine plants of interior BC *C. misandra*
 - 19. Leaves 3-9 mm wide; perigynia 1.25-2.25 mm wide; montane and subalpine plants of coastal BC *C. luzulina*
 - 17. Lowest bract sheathless.
 - 20. Male spikes more than 10 mm long; female spikes with more than 25 perigynia; plants usually more than 50 cm tall.
 - 21. Leaves in-rolled, not more than 2 mm wide, smooth on the margins; stems triangular, the angles rounded *C. lasiocarpa*
 - 21. Leaves flat, 2-5 mm wide, rough on the margins; stems sharply triangular *C. lanuginosa*
 - 20. Male spikes less than 10 mm long; female spikes with less than 15 perigynia; plants less than 50 cm tall.
 - 22. Lower female spikes arising from the base of the stem on elongate weak stalks, widely separated from the terminal spike.
 - 23. Bracts of lowest non-basal female spikes leaflike, normally exceeding the stem.
 - 24. Stems normally loosely tufted; perigynia 2.5-3 mm long, short-beaked, shallowly bidentate; male spikes 2-5 mm long, inconspicuous *C. deflexa*
 - 24. Stems more or less densely tufted; perigynia (2.5) 3-4.5 mm long, the beaks usually more than 0.5 mm long; male spikes more than 5 mm long, conspicuous *C. rossii*
 - 23. Bracts of lowest non-basal female spikes scalelike and shorter than the stem.
 - 25. Perigynia nearly circular in cross-section, 1.7-2.3 mm wide, the beaks not strongly two-edged *C. brevicaulis*
 - 25. Perigynia triangular in cross-section, 1-1.5 mm wide, the beaks strongly two-edged *C. tonsa*

- 22. Lower female spikes at most moderately separated from the upper ones, all developing on the upper part of the stem.
- 26. Terminal spike female at the tip, male at the base; stems often shorter than the leaves *C. swanii*
- 26. Terminal spike male throughout; stems usually surpassing the leaves.
- 27. Perigynia up to 1.5 mm wide, egg-shaped or elliptical (excluding the short-stalked base and beak); plants with short, intertwined rhizomes *C. peckii*
- 27. Perigynia 2-2.3 mm wide, globe-shaped to egg-shaped (excluding the base and beak); plants with long, well-developed rhizomes *C. inops*
- 16. Perigynia beakless or with the beaks obliquely cut.
- 28. Stems with 1 or 2 female spikes from long, thread-like, basal stalks; female scales abruptly and concavely awl-tipped or short-awned *C. pedunculata*
- 28. Stems without female spikes at the bases; female scales not abruptly and concavely awl-tipped.
- 29. Male spikes 3-6 mm long; female scales blunt, 1/2 as long as the perigynia; stigmas very short *C. concinna*
- 29. Male spikes 8-25 mm long; female scales pointed to long-pointed, from somewhat shorter than to exceeding the perigynia; stigmas long, slender.
- 30. Perigynia loosely hairy, wider and longer than the scales which are fringed with fine hairs; male spikes unstalked or nearly so; female spikes 5- to 10-flowered; bracts very short-sheathing; stems smooth or nearly so; stigmas 3 or often 4 *C. concinnoides*
- 30. Perigynia appressed-hairy, narrower and shorter than the smooth scales; male spikes noticeably stalked; female spikes 10- to 25-flowered; lowest bracts long-sheathing; stems strongly roughened above; stigmas 3 *C. richardsonii*
- 15. Perigynia not hairy.
- 31. Lowest bract long-sheathing (sheath enveloping stalk of the lowest spike).
- 32. Lowest bract bladeless; scales yellowish-white to pale brown *C. eburnea*
- 32. Lowest bract with a bristlelike or leafy blade; scales green or brownish to purplish-black.
- 33. Female spikes short-stalked or unstalked, the lowest spikes with stalks shorter than the spikes.
- 34. Leaves narrow, 0.2-1 mm wide, grooved or in-rolled; female spikes 1 to 3, globe-shaped, with 1 to 5 perigynia *C. glacialis*
- 34. Leaves 2-15 mm wide, V-folded or M-folded; female spikes usually 2 to 7, elongated, with 5 to 20 perigynia.
- 35. Perigynia rounded at the bases, nearly round in cross-section; achenes loosely enveloped *C. crawei*
- 35. Perigynia tapering at the bases, triangular; achenes closely enveloped.
- 36. Plants rhizomatous, bluish-green; leaves 2-3.5 mm wide, V-folded *C. livida*
- 36. Plants tufted, green; leaves 6-15 mm wide, M-folded *C. hendersonii*
- 33. Female spikes on longer stalks, the stalks of the lowest spikes about as long as the spikes or longer.
- 37. Female spikes more than 4 mm in diameter; perigynia 5-6 mm long, with beaks as long as or longer than the perigynia body.
- 38. Base of the stems with scaly remnants of the old leaf sheaths; perigynia 2-ribbed and with a few obscured nerves *C. sprengelii*

- 38. Base of the stems without scaly remnants of the old leaf sheaths; perigynia without ribs *C. sylvatica*
- 37. Female spikes less than 4 mm in diameter; perigynia 2.5-5 mm long, with beaks less than 1/2 the length of the perigynia body.
- 39. Plants rhizomatous; perigynia 3.5-5 mm long; female spikes loosely upright, not drooping *C. vaginata*
- 39. Plants fibrous rooted; perigynia 2-3 mm long; at least the lowest spikes drooping.
- 40. Terminal spike with both sexes, female flowers above male flowers *C. krausei*
- 40. Terminal spike male *C. capillaris*
- 31. Lowest bract sheathless or very short-sheathing (the stalk of the lowest spike free).
- 41. Perigynia beakless or the beaks not toothed. (See page 29 for the opposite lead.)
- 42. Leaf surface hairy.
 - 43. Perigynia abruptly contracted into short cylindrical beaks, coarsely ribbed; scales broadly elliptical *C. torreyi*
 - 43. Perigynia narrowed to beakless tips; nerveless or only faintly nerved; scales narrowly elliptical *C. pallescens*
- 42. Leaf surface not hairy.
- 44. Roots with yellowish-woolly hairs.
 - 45. Female scales terminating in slender, rough awns, 2-12 mm long; perigynia inconspicuously pimpled *C. macrochaeta*
 - 45. Female scales awnless or awns < 2 mm long; perigynia conspicuously pimpled.
 - 46. Lowest bracts short, awned and not leaflike; perigynia often black; scales wrapping around the bases of the perigynia *C. pluriflora*
 - 46. Lowest bracts usually as long as or longer than the spikes, usually leaflike, rarely awnlike; perigynia green or bluish-green when ripe; scales not wrapping around the bases of the perigynia.
 - 47. Male spike 15-27 mm long; female scales blunt or pointed, as broad as or broader than the perigynia and barely exceeding them in length, persistent; leaves glaucous, in-rolled; plants with prolonged, slender rhizomes *C. limosa*
 - 47. Male spike 4-12 mm long; female scales long-pointed, much narrower and longer than the perigynia, early deciduous; leaves scarcely glaucous, plants tufted *C. magellanica*
- 44. Roots without yellowish hair cover.
- 48. Terminal spike male.
- 49. Perigynia nearly circular or triangular (the angles rounded) in cross-section, little or not at all flattened.
- 50. Plants less than 20 cm tall, rhizomatous; bract of the lowest spike with conspicuous, translucent, ear-shaped lobes *C. supina*
- 50. Plants more than 20 cm tall, tufted; bract of the lowest spike (if developed at all) without ear-shaped lobes.
- 51. Perigynia beakless, lustrous, green; lower sheaths short-hairy *C. pallescens*
- 51. Perigynia with short beaks, pitted, bluish-green or reddish-brown, firm; lower sheaths not hairy.

52. Perigynia 2.5-3.5 mm long, nerveless, short-stalked; leaves 1-4 mm wide *C. stylosa*
52. Perigynia 3.5-4.5 mm long, 2-ribbed and strongly nerved, with broad bases; leaves 3-8 mm wide *C. raynoldsii*
49. Perigynia flattened.
53. Lowest leaves well developed, numerous on the lower third of the stem, clothed at the stem base with dried-up leaves of the previous year at flowering time, not purplish-tinged at the base.
54. Perigynia egg- to globe-shaped; spikes narrowly egg-shaped; plants of SE BC *C. paysonis*
54. Perigynia narrowly egg-shaped; spikes cylindrical; plants of N BC *C. microchaeta*
53. Lowest leaves reduced to scales, absent on the lower third of the stem, leaves of the previous year not persistent or much desiccated at flowering time, purplish-tinged at the base.
55. Female scales blunt to pointed, the midribs nearly or quite obsolete, inconspicuous; perigynia marginally 2-ribbed, otherwise nerveless *C. podocarpa*
55. Female scales with midribs extending into abrupt, slender tips or the scales awl-tipped with conspicuous midribs; perigynia marginally 2-ribbed and obscurely nerved; achenes short-stalked.
56. Female scales with midribs extending into abrupt, slender tips or the scales awl-tipped with awns less than 1 mm long; perigynia beaks about 0.2-0.5 mm long *C. spectabilis*
56. Female scales awl-tipped with slender, rough awns 3-12 mm long; perigynia beaks about 0.25 mm long *C. macrochaeta*
48. Terminal spike with female flowers above male flowers.
57. Stems lateral, arising singly and not clothed at the base with the dried-up leaves of the previous year; lower sheaths conspicuously breaking below into threads *C. buxbaumii*
57. Stems tufted, arising from amidst the persistent leaves of the previous year and their desiccated fragments; lower sheaths not breaking into threads.
58. Female scales abruptly awned *C. gmelinii*
58. Female scales blunt to pointed, lacking distinct awns.
59. Spikes unstalked or on short stiff stalks; stalk of the lowest spike usually less than 1/2 the spike length.
60. Lateral spikes cylindrical, separate, with only the upper ones sometimes loosely aggregated into a very elongated head *C. parryana*
60. Lateral spikes egg- or globe-shaped, closely aggregated into a nearly globe- or egg-shaped head.
61. Perigynia flattened; sheaths of the basal leaves with conspicuous black streaks *C. albonigra*
61. Perigynia nearly globe-shaped; sheaths of the basal leaves purplish-red to brownish
C. media
59. Spikes stalked; stalk of the lowest spike longer than 1/2 the spike length.
62. Perigynia strongly flattened, papery, 5 mm long, light green; spikes 6 to 10, egg-shaped cylindrical, nodding in one direction *C. mertensii*
62. Perigynia round or triangular (the angles rounded) in cross-section, only slightly flattened, 2.5-4.5 mm long, glaucous, dull green to brownish-black; spikes 3 to 6, short-cylindrical, erect or spreading in all directions.

63. Perigynia smooth; scales pointed to long-pointed *C. epapillosa*
63. Perigynia somewhat pimples or spined; scales blunt.
64. Lateral spikes egg-shaped; perigynia sub-inflated, triangular in cross-section, only scarcely compressed *C. atosquama*
64. Lateral spikes cylindrical to linear; perigynia compressed *C. atratiformis*
41. Perigynia with bidentate beaks.
65. Female spikes close together, forming a head below the male spike(s), female spikes sometimes solitary, slightly remote or at the base of the stems.
66. Perigynia 7-10 mm long, coarsely nerved; male spikes 1 to 4, 2-6 cm long *C. retrorsa*
66. Perigynia 2-6 mm long, ribbed; male spikes solitary, 0.5-2 cm long.
67. Fertile stems less than 10 cm tall, usually hidden within stiff, grey green leaves; perigynia more or less leathery, dull grey green *C. tonsa*
67. Fertile stems usually more than 10 cm tall, taller than their basal green or yellow-green leaves; perigynia membranaceous, green or yellow-green.
68. Lower perigynia reflexed, the beaks curved, about as long as the body *C. flava*
68. Lower perigynia not reflexed, the beaks nearly straight, distinctly shorter than the body *C. viridula*
65. Female spikes remote, not forming a head.
69. Sheaths hairy below *C. atherodes*
69. Sheath not hairy below.
70. Beaks of the perigynia lined with small-bristled teeth on the margins.
71. Terminal spike usually male or with both sexes, male flowers above female flowers, the lower 1 or 2 spikes female or with both sexes, male flowers above female flowers; plants with slender rhizomes; perigynia fringed with fine hairs *C. petricosa*
71. Terminal spike male or with both sexes, female flowers above male flowers, the lateral spikes female; plants densely tufted or with short rhizomes; perigynia fringed with small-bristled teeth only on the beak margins.
72. Leaves less than 3 mm wide; perigynia not more than 1 mm wide; alpine plants of interior BC *C. misandra*
72. Leaves 3-9 mm wide; perigynia 1.25-2.25 mm wide; montane to alpine plants of coastal BC *C. luzulina*
70. Beaks of the perigynia smooth on the margins.
73. Perigynia nerveless.
74. Female spikes mostly unstalked, the lowest shortly stalked, erect; beaks shorter than the perigynia body; bases of the stems scaly *C. amplifolia*
74. Female spikes stalked, the lowest nodding; beaks as long as or longer than the perigynia body; bases of the stems fibrous *C. sprengelii*
73. Perigynia with nerves on both sides.
75. Perigynia finely and closely ribbed with 6 to 10 ribs on each side; scales with long, rough awns.
76. Teeth of the perigynia beaks straight; perigynia nearly round in cross-section, more or less inflated, membranaceous or submembranaceous; rootstock with long, slender, horizontal stolons; ligules short, wider than long or about as wide as long; achenes broadly egg-shaped *C. hystricina*

76. Teeth of the perigynia beaks curved out; perigynia flattened-triangular, scarcely inflated, leathery, closely or rather closely enveloping the achenes below; stems tufted and not stoloniferous; ligules much longer than wide, very conspicuous; achenes egg-shaped *C. comosa*
75. Perigynia coarsely-ribbed with fewer than 6 ribs on each side, scales pointed to long-pointed, without rough awns.
77. Lower perigynia reflexed to widely spreading; female spikes clustered together *C. retrorsa*
77. Lower perigynia not reflexed; female spikes widely separated along the upper part of the stem.
78. Rhizomes short-creeping; perigynia appressed-ascending, ascending or spreading-ascending, strongly nerved; lower sheaths breaking into threads; ligules much longer than wide.
79. Perigynia lanceolate, the longest 7.5-10 mm long, 3-5 times as long as wide, leathery, gradually tapering to beaks *C. exsiccata*
79. Perigynia egg-shaped to narrowly egg-shaped, the longest 4.5-7.5 mm long, 2-3.5 times as long as wide, papery, inflated, rather abruptly contracted into beaks *C. vesicaria*
78. Rhizomes long, slender, horizontal; perigynia abruptly spreading or recurved at maturity; lower sheaths not breaking into threads; ligules wider than long or slightly longer than wide.
80. Male spikes usually solitary, often with 1 or 2 smaller ones at the bases; perigynia purplish-black, except for the white translucent tips; female spikes 1-3 (5) cm long; stems 15-45 cm tall *C. membranacea*
80. Male spikes 2 to 4; perigynia yellowish-green, straw-coloured, or light brownish; female spikes 1-10 cm long; stems 30-120 cm tall.
81. Plants with folded leaves 2-4 mm wide, with silica pimples on the upper surface; female spikes dense; perigynia rounded, egg-shaped or flask-shaped, horizontally spreading, abruptly contracted into abbreviated beaks; stems triangular (the angles rounded) above *C. rostrata*
81. Plants with flat leaves 4-12 mm wide, without silica pimples on the upper surface; female spikes loose; perigynia obliquely divergent, gradually tapering into abbreviated beaks; stems sharply triangular above *C. utriculata*

Carex adusta* Boott*lesser brown sedge****HABITAT/RANGE:**

Dry disturbed sites and open forests in the montane zone; rare in SE BC, known only from Nakusp; N to NT, E to NF and S to MA, NH, MI, MN and ID.

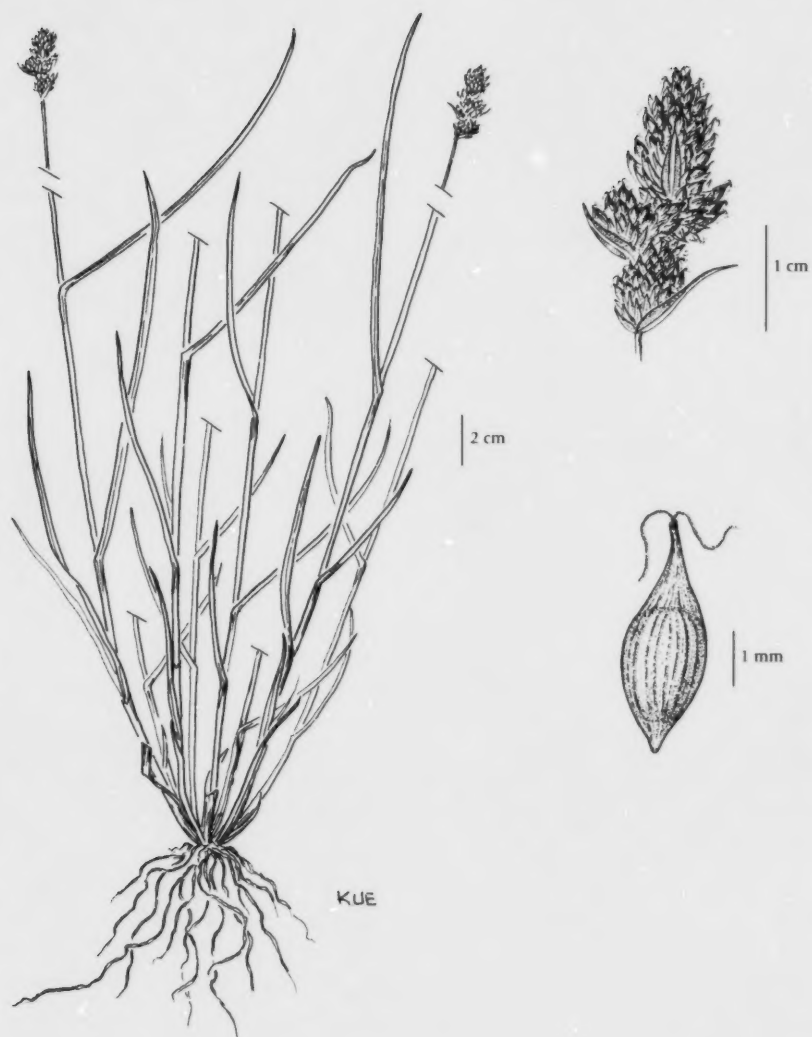
DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems 30-100 cm tall, smooth, exceeding the leaves.

Leaves: Sheaths tight; blades flat, 2-5 mm wide, borne on the lower 1/2 of the stem but not crowded at the bases.

Flowers: Spikes 4 to 8; forming ellipsoid heads 1-4 cm long with lower spikes slightly remote, unstalked, with both female and male flowers, the female ones towards the tips, the male parts often elongated; bracts of lowest spikes often leaflike, longer than the inflorescence, expanded at the bases, with the green midribs flanked by translucent coppery margins.

Fruits: Perigynia egg-shaped, 4-5 mm long, 2-3 mm wide, light green to straw-coloured or brownish, more or less flattened, the margins winged nearly to the bases and the upper 1/2 fringed with teeth, lightly several-nerved on both sides or with fainter nerves on the lower side, the beaks bidentate, less than 1 mm long, wing-margined and toothed below; female scales egg-shaped, brownish, with green centres, with broad translucent margins, somewhat shorter and narrower than the perigynia, short-awned; stigmas 2; achenes lens-shaped, 1.8-2.1 mm long.

*Carex adusta*

Carex aenea* Fern.*bronze sedge****HABITAT/RANGE:**

Dry to moist disturbed sites and open forests in the lowland and montane zones; common in BC in and E of the Coast-Cascade Mountains, infrequent in coastal SW BC; N to AK and YT, E. to Labr. and NF and S to MA, PA, MN, SC, MT, ID and WA.

DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems 30-80 cm tall, exceeding the leaves.

Leaves: Sheaths tight; blades flat, 2-5 mm wide, borne on the lower half of the stems but not crowded at the bases.

Flowers: Spikes 4 to 8, with both female and male flowers, the female ones towards the tips, the part with stamens often elongated, the spikes unstalked, forming a loose inflorescence with lower spikes remote; bracts subtending the spikes reduced and inconspicuous.

Fruits: Perigynia egg-shaped, 3.5-5 mm long, 1.6-2.2 mm wide, light green to straw-coloured or brownish, more or less flattened, the margins winged nearly to the bases and the upper 1/2 fringed with teeth, lightly several-nerved on both sides or with fainter nerves ventrally; beaks 2-cleft, less than 1 mm long, wing-margined and toothed below; female scales egg-shaped, brownish with green centres and broad translucent margins, somewhat shorter and narrower than the perigynia, short-awned; stigmas 2; achenes lens-shaped, 1.5-2 mm long.

Carex albonigra* Mack.*two-toned sedge****HABITAT/RANGE:**

Dry meadows and rocky slopes in the upper subalpine and alpine zones; common throughout BC in and E of the Coast-Cascade Mountains, infrequent in coastal SW BC; N to AK, YT and NT, E to SW AB and S to NM, AZ and CA.

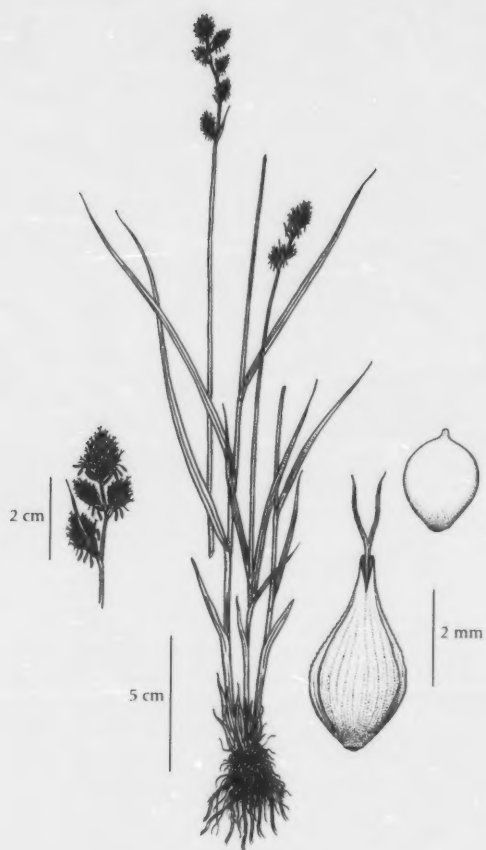
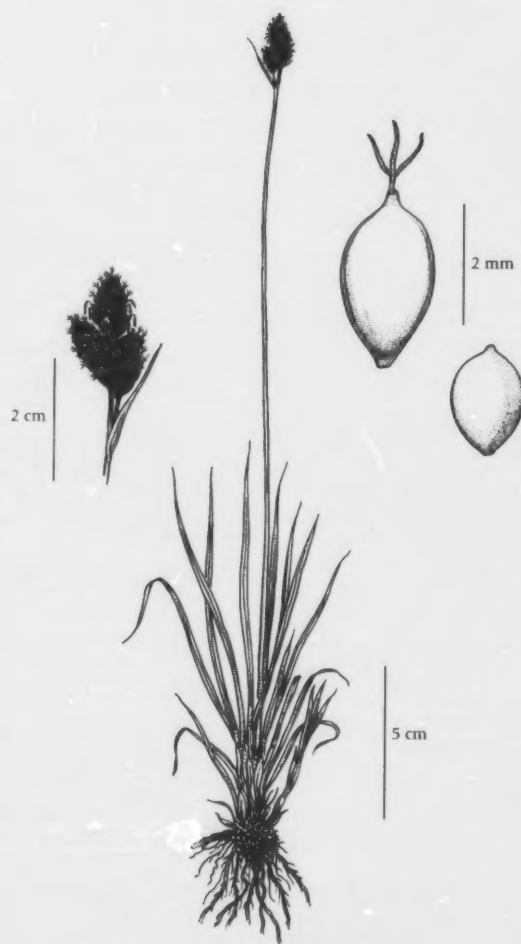
DESCRIPTION:

General: Perennial, tufted herb from short rhizomes; stems 10-30 cm tall, much exceeding the leaves.

Leaves: Sheaths reddish-dark towards the bases; blades flat, 2-7 mm wide, the lower ones not much reduced.

Flowers: Spikes usually 3, unstalked to short-stalked below, 0.6-2.5 cm long, the terminal one with both female and male flowers, the female flowers towards the tips, the lower 1 or 2 spikes with female flowers, erect; bracts subtending the spikes short-sheathing, leaflike, about equalling or shorter than the spikes.

Fruits: Perigynia egg-shaped, flattened, 2.7-3.5 mm long, 1.8-2 mm wide, reddish-black, flat, the margins translucent, 2-nerved near the margins, the beaks short, less than 0.4 mm long; female scales broadly egg-shaped, about as long as and wider than the perigynia, pointed at the tips, reddish-black, roughly pimpled, with white translucent margins and tips; stigmas 3; achenes 3-angled, granular, 1.3-1.7 mm long.

*Carex aenea**Carex albonigra*

Carex amplifolia* Boott*bigleaf sedge****HABITAT/RANGE:**

Moist meadows, swamps and bogs in the lowland and montane zones; rare in S BC; S to MT, ID, NV and CA, disjunct in NM.

DESCRIPTION:

General: Perennial, tufted herb from long-creeping rhizomes; stems 30-80 cm tall, equalling the leaves.

Leaves: Sheaths tight, short; blades flat, rough-margined, well distributed along the stem, 8-20 mm wide, the lower ones slightly reduced.

Flowers: Spikes 3 to 7, the terminal one with male flowers, the lower spikes with female flowers, unstalked to short-stalked, 3-14 cm long, interrupted, erect; bracts subtending the spikes leaflike, sheathless, the lower ones longer than the inflorescence, the upper ones reduced.

Fruits: Perigynia egg-shaped, 2.6-3.3 mm long, 1.5-1.7 mm wide, brownish-green, 3-angled, the angles rounded, smooth to somewhat wrinkled, 2-nerved, the beaks about 1/3 the length of the perigynia bodies, slightly bidentate; female scales egg-shaped, shorter or longer than the perigynia, often short awn-tipped, brownish-red, with lighter 3-nerved centres and translucent margins; stigmas 3; achenes 3-angled, granular, 1.4-1.8 mm long.

Carex anthoxantha* J. & K. Presl*yellow-flowered sedge****HABITAT/RANGE:**

Fens, bogs and bog forests from the montane to subalpine zones; frequent in coastal BC, rare in NW BC; amphiberian, N to AK, YT and NT, S to WA; E Asia.

DESCRIPTION:

General: Perennial herb from creeping rhizomes; stems 5-40 cm tall, equalling the leaves or nearly so, roughened above.

Leaves: Sheaths short, greenish-whitish; blades 2 to 4 from near the base, flat, 1-2 mm wide, the lower ones lacking or reduced, roughened at the tips.

Flowers: Spikes solitary, with both female and male flowers, the male flowers towards the tips, 1-3 cm long, 2-3 mm wide, erect; bract subtending the spike lacking.

Fruits: Perigynia lanceolate to narrowly elliptical, 3.8-4.2 mm long, 1.3-1.6 mm wide, yellowish-green to straw-coloured, obscurely compressed-triangular, smooth, many-nerved, the beaks about 1 mm long; female scales lanceolate, shorter or longer than the perigynia, the lower ones awn-tipped, the upper ones round-tipped, dark brown with 1- to 3-nerved green centres; stigmas 3, rarely 2; achenes 3-angled, granular, 1.3-1.5 mm long.

Carex aperta* Boott (*C. turgidula* Bailey)*Columbia sedge****HABITAT/RANGE:**

Wet lake margins, riverbanks and meadows in the lowland, steppe and montane zones; frequent in S BC south of 55° N, infrequent in coastal BC, absent on the Queen Charlotte Islands and most of adjacent mainland; E to SW AB and S to MT, ID, and OR.

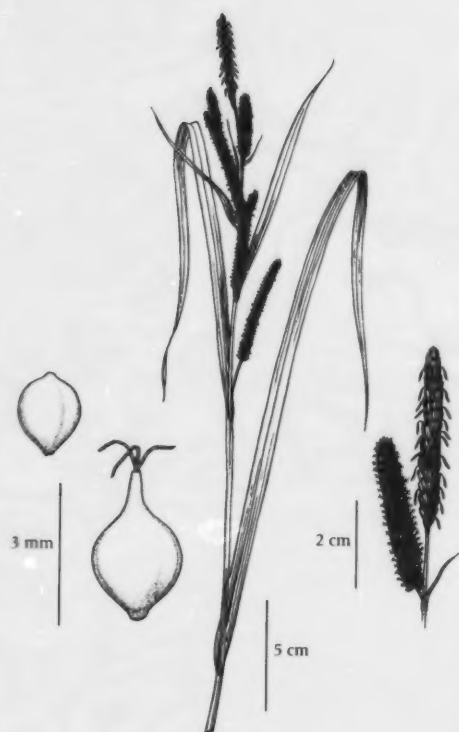
DESCRIPTION:

General: Perennial, loosely or densely tufted herb from short rhizomes; stems triangular, with smooth edges, slightly rough below the inflorescence, 15-100 cm tall, exceeding the leaves.

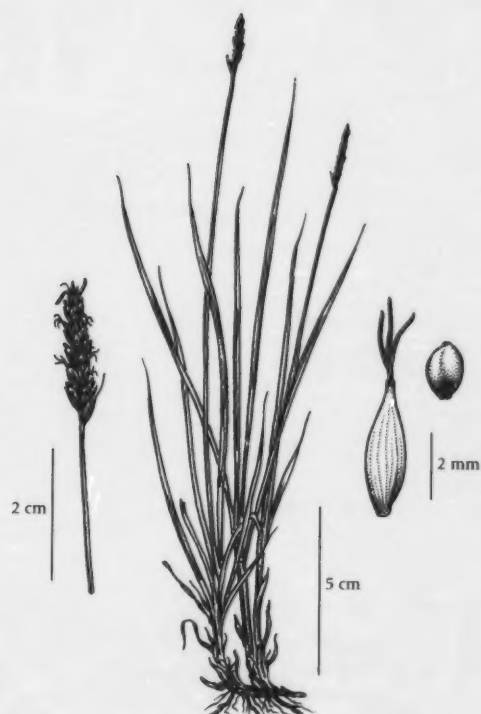
Leaves: Sheaths tight, short; blades flat, arising from the lower part of the stem, 2-6 mm wide, the lower ones slightly reduced.

Flowers: The terminal spike or top 2 with male flowers, the lower 2 to 3 with female flowers and occasionally with a few male flowers at the top, unstalked or with short stalks, 1.5-4 cm long, erect; lowermost bract subtending the spikes leaflike, sheathless with brown ear-shaped lobes, usually shorter than or equalling the inflorescence, the upper ones reduced.

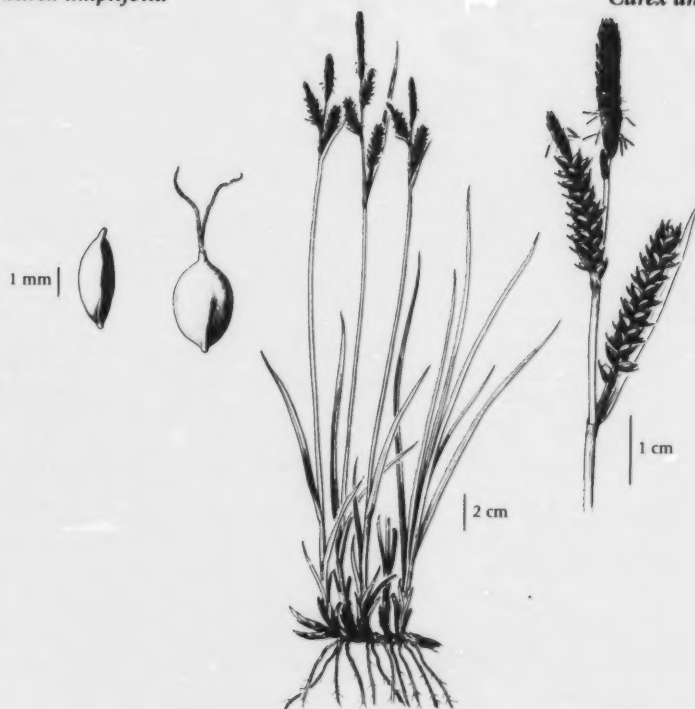
Fruits: Perigynia egg- to globe-shaped, 2.5-2.8 mm long, 1.5-2 mm wide, green, inflated, nerveless, the beaks minute, up to 0.3 mm long; female scales egg-shaped, longer and narrower than the perigynia, purplish-brown, with lighter centres; stigmas 2; achenes lens-shaped, 1.3-1.7 mm long.



Carex amplifolia



Carex anthoxantha



Carex aperta

Carex aquatilis Wahlenb. (*C. aquatilis* ssp. *altior* [Rydb.] Hult. = ssp. *aquatilis*)

water sedge; northern sedge

HABITAT/RANGE:

Wet meadows, fens, streambanks and lakeshores in all vegetation zones; common throughout BC, less frequent along the coast; circumpolar, N to AK, YT and NT, E to NF and S to MA, VA, IN, MO, KA, NM, AZ and CA; Greenland, Eurasia.

DESCRIPTION:

General: Perennial, tufted herb from long, creeping rhizomes; stems triangular, with smooth edges, 15-120 cm tall, equalling the leaves.

Leaves: Sheaths tight, short; blades flat, well distributed along the stem, 3-7 mm wide, the lower ones slightly reduced.

Flowers: The terminal spikes 1 to 3, short-stalked, with male flowers, the lower spikes 2 to 7, with female flowers, unstalked or with short stalks, 3-14 cm long, erect; bracts subtending the spikes leaflike, sheathless, the lower ones longer than the inflorescence, the upper ones reduced.

Fruits: Perigynia egg-shaped, 2-3.6 mm long, 1.3-2.3 mm wide, brownish-green, 3-angled, the angles rounded, smooth to somewhat wrinkled, 2-nerved, the beaks entire; female scales egg-shaped, shorter than or about as long as the perigynia, often shortly awn-tipped, brownish-red to blackish, with lighter 3-nerved centres, with translucent margins; stigmas 2; achenes lens-shaped, granular, 1.4-1.8 mm long. Two subspecies may be recognized in BC:

1. Male spikes 2 to 3; plants generally more than 20 cm tall; plants more common southward ssp. *aquatilis*
1. Male spike 1; plants generally less than 20 cm tall; plants more common northward ssp. *stans* (Drej.) Hult.

Carex arcta Boott

northern clustered sedge

HABITAT/RANGE:

Moist to wet meadows, fens, marshes, ditches and clearings in the lowland, steppe and montane zones; common in S BC; N to AK, YT and NT, E to Labr. and NB, and S to MA, NY, MI, WI, MN, ID and CA.

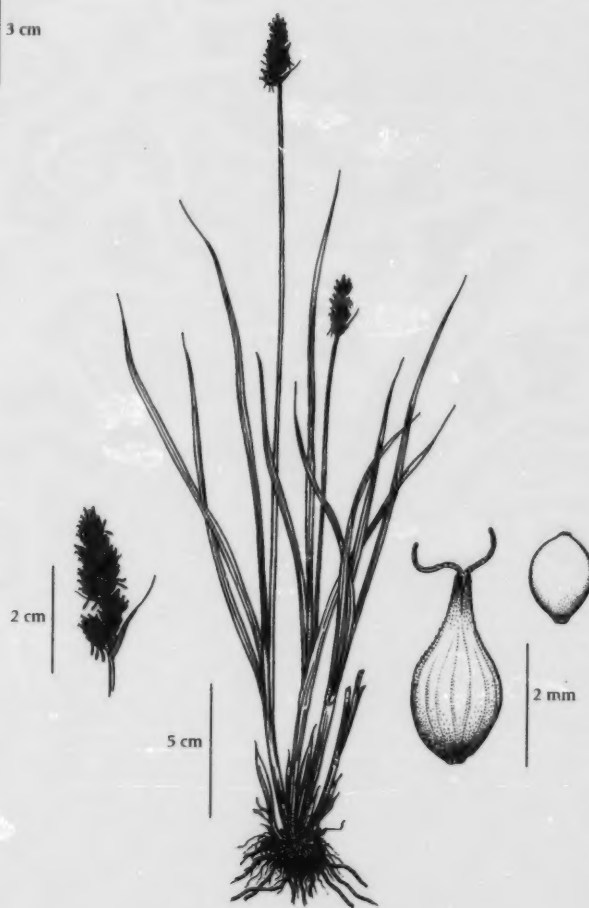
DESCRIPTION:

General: Perennial, somewhat tufted herb from elongate fibrous roots; stems 25-60 cm tall, about as long as the leaves.

Leaves: Sheaths tight; blades numerous, borne on the lower part of the stem, 1.5-4 mm wide, flat.

Flowers: Spikes 5 to 15 in a 3- to 5-cm long, dense, cylindrical or narrowly egg-shaped head, occasionally with a few spikes separate below, many-flowered, 5-8 mm long, ascending, with both female and male flowers, the female flowers towards the tips, the male flowers inconspicuous; lowermost bract awnlike, about 0.5-2 cm long.

Fruits: Perigynia egg-shaped, 2.2-3.5 mm long, 0.8-1 mm wide, green, dark green or brownish, minutely whitish-dotted, plano-convex, smooth, obscurely ribbed, especially above, unstalked, the beaks about 1 mm long, minutely sharp-toothed, shallowly cleft; female scales egg-shaped, covering about 1/2 of the perigynia, pointed, nearly colourless to brownish, with green midribs; stigmas 2; achenes lens-shaped, 1.2-1.7 mm long.

*Carex aquatilis* ssp. *aquatilis**Carex arcta*

Carex arctiformis Mack. (*C. canescens* ssp. *arctiformis* [Mack.] Calder & Taylor)**polar sedge****HABITAT/RANGE:**

Bogs, swamps, fens and wet meadows in the lowland zone; frequent in coastal BC; N to AK.

DESCRIPTION:

General: Perennial, somewhat tufted herb from elongate fibrous roots; stems 20-60 cm tall, sharply triangular and rough below the inflorescence, about as long as the leaves.

Leaves: Sheaths tight; blades numerous, borne on the lower part of the stem, 2-3 mm wide, flat.

Flowers: Spikes 5 to 10 in a dense head 1.5-3.5 cm long (with 1 to 3 spikes separated below the head), egg-shaped, many-flowered, about 5 mm long, ascending, with both female and male flowers, the female flowers towards the tips, the male flowers inconspicuous; bracts reduced, only the lowermost bract sometimes awnlike, about 0.5-2 cm long.

Fruits: Perigynia elliptical, 2.2-2.5 mm long, 0.8-1.5 mm wide, light brown, minutely whitish-dotted, plano-convex, smooth, several-nerved, especially above, unstalked, the beaks short, 0.25 mm long, smooth, not cleft; female scales egg-shaped, almost covering the perigynia, pointed, green, with green midribs; stigmas 2; achenes lens-shaped, 1.2-1.7 mm long, filling the perigynia.

Carex atherodes Spreng.**awned sedge****HABITAT/RANGE:**

Wet meadows, fens, marshes and lakeshores in the montane and steppe zones; frequent in BC south of 53° N and E of the Coast-Cascade Mountains, infrequent northward; circumpolar, N to AK, YT and NT, E to PQ and S to ME, NY, IN, MO, KS, NM, AZ and CA; Eurasia.

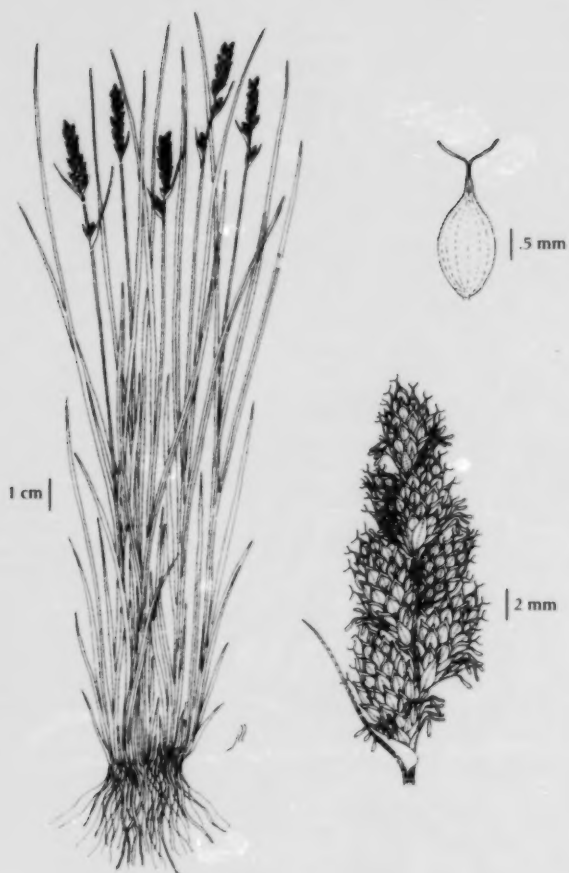
DESCRIPTION:

General: Perennial, loosely tufted herb from long-creeping rhizomes; stems 30-150 cm tall, exceeding the leaves, smooth, reddish-tinged at the bases.

Leaves: Lower sheaths breaking into threads, the middle to upper sheaths long stiff-hairy all around or sometimes only towards the summits; ligules conspicuous; blades flat, 4-10 mm wide, smooth or often stiff-hairy on the lower side towards the bases, cross-walled.

Flowers: Spikes 4 to 10, the upper 2 to 6 with male flowers, separate, unstalked, erect, narrowly linear, 2-6 cm long, the lower 2 to 4 with female flowers, widely separated, short-stalked, erect, narrowly cylindrical, 3-10 cm long; bracts subtending the male spikes reduced or lacking, those subtending the female flowers leaflike and well developed, longer than the inflorescence.

Fruits: Perigynia ascending, lanceolate to broadly egg-shaped, 7-10 mm long, 1.7-2.5 mm wide, yellowish-green or light brownish, smooth, somewhat inflated, many-nerved, the beaks bidentate, toothed, the spreading teeth 1.2-3 mm long; female scales narrowly egg-shaped, shorter or longer than the perigynia, awn-tipped, the awns nearly as long as the scales, dull reddish-brown with 3-nerved green centres; stigmas 3; achenes 3-angled, 2-2.5 mm long.

*Carex arctiformis**Carex atherodes*

***Carex athrostachya* Olney**
slender-beaked sedge

HABITAT/RANGE:

Moist to wet meadows and open forests in the lowland, montane and steppe zones; common in BC south of 55° N, rare northward and along the coast, absent from the Queen Charlotte Islands; N to AK, E to MB and S to TX, NM, AZ and CA.

DESCRIPTION:

General: Perennial, tufted herb from fibrous rootstocks; stems 15-100 cm tall, exceeding the leaves.

Leaves: Sheaths tight; blades flat, 1.5-4 mm wide, borne on the lower 1/3 of the stems.

Flowers: Spikes 4 to 10, aggregated into a 1- to 2-cm long head, unstalked, with both female and male flowers, the female ones towards the tips; bracts subtending the spikes sheathless, at least one of the lower ones conspicuously prolonged and bristlelike, 2-10 cm long, the others reduced or inconspicuous.

Fruits: Perigynia lanceolate or narrowly egg-shaped, 3-5 mm long, 1.2-1.8 mm wide, light green to straw-coloured or brownish, more or less flattened, the margins winged nearly to the bases, the upper 1/2 fringed with teeth, lightly several-nerved on both sides or nerveless below, the beaks bidentate, less than 1 mm long, narrowly margined and toothed below; female scales egg-shaped, brownish with green centres and translucent margins, somewhat shorter and narrower than the perigynia, short-awned; stigmas 2; achenes lens-shaped, 1.1-1.6 mm long.

***Carex atratifomis* Britt. (*C. atrata* L. ssp. *atratifomis* [Britt.] Kükenthal, *C. raymondii* Calder, *C. atratifomis* Britt. ssp. *raymondii* [Calder] Porsild)**

black sedge

HABITAT/RANGE:

Moist forests, thickets, meadows and streambanks in the montane zone; frequent in N BC; N to AK, YT and NT, disjunct E to NF and S to MA, NH, NY and MI.

DESCRIPTION:

General: Perennial, tufted herb from short rhizomes; stems 30-70 cm tall, exceeding the leaves.

Leaves: Sheaths reddish towards the bases; blades flat, with rolled-under margins, 3-5 mm wide, the lower ones not much reduced.

Flowers: Spikes 3 to 6, the terminal with both female and male flowers, the female ones towards the tips, the lower 2 to 5 spikes with female flowers, stalked and nodding, 1-2.5 cm long; bracts subtending the spikes short-sheathing, leaflike, about equalling the spikes.

Fruits: Perigynia broadly egg-shaped, 2.5-4 mm long, 1.3-1.8 mm wide, with rounded margins above, greenish-brown to reddish-black, flat, nerveless, the beaks short, shallowly bidentate, less than 0.4 mm long; female scales lanceolate, usually shorter than and nearly as wide as the perigynia, pointed at the tips, light to dark brown, with translucent margins; stigmas 3; achenes 3-angled, egg-shaped, granular, 1.2-1.4 mm long.

***Carex atosquama* Mack. (*C. atrata* auct. pro parte, non L., *C. atrata* L. ssp. *atosquama* [Mack.] Hult.)**

black-scaled sedge

HABITAT/RANGE:

Moist to mesic slopes, meadows and thickets in the subalpine and alpine zones; common in BC in and east of the Coast-Cascade Mountains; N to AK, YT and NT, E to SW AB and S to CO, UT, ID and OR.

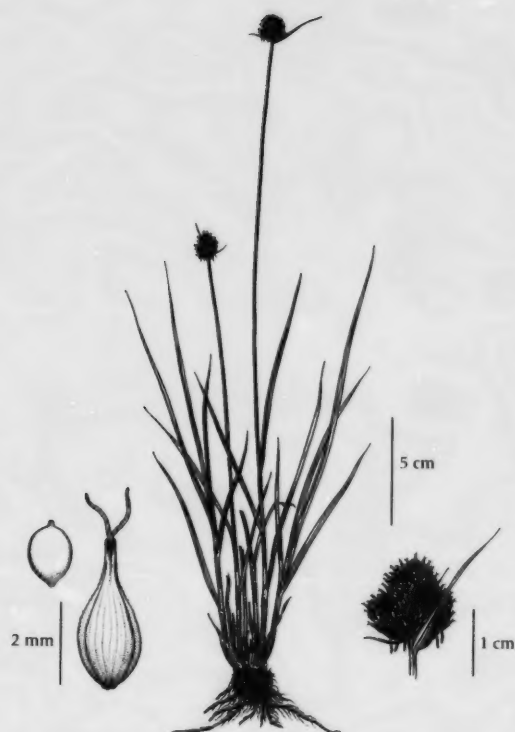
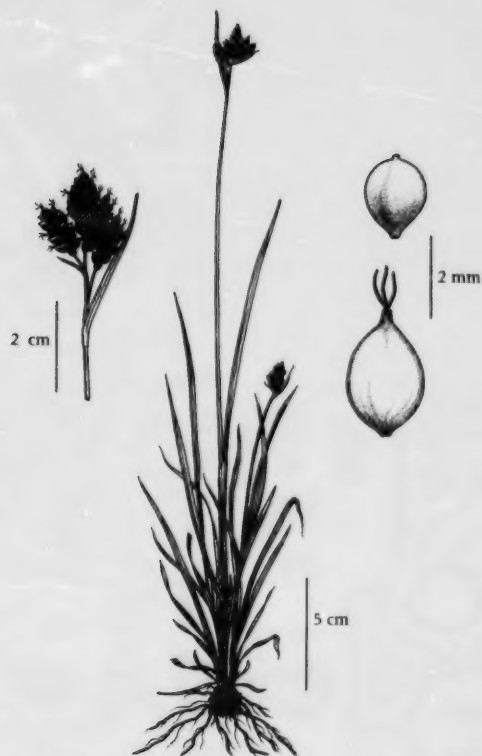
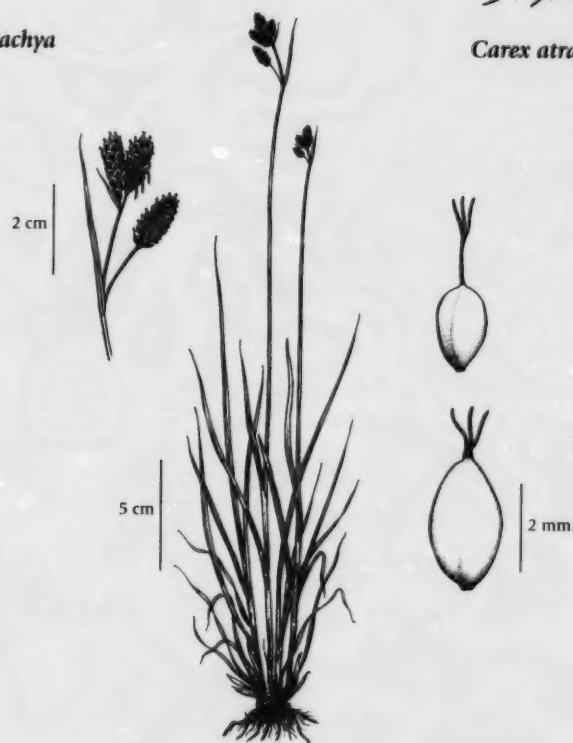
DESCRIPTION:

General: Perennial, tufted herb from short rhizomes; stems 15-80 cm tall, much exceeding the leaves.

Leaves: Sheaths reddish towards the bases; blades flat, 2-5 mm wide, the lower ones not much reduced.

Flowers: Terminal spike with both female and male flowers, the female ones towards the tips, the lateral spikes female, short-stalked and upright to spreading, 1-2.5 cm long; bracts subtending the spikes short-sheathing, leaflike, about equalling the spikes.

Fruits: Perigynia elliptical, 2.7-3.5 mm long, 1.2-2 mm wide, straw-coloured often with greenish margins, nerveless and pimpled, the beaks short, less than 0.4 mm long; female scales broadly lanceolate, shorter than and about as wide as the perigynia, reddish-black, roughly pimpled, with short-pointed tips; stigmas 3; achenes 3-angled, egg-shaped, granular, 1.2-1.4 mm long.

*Carex athrostachya**Carex atratiformis**Carex atosquama*

Carex aurea Nutt.
golden sedge**HABITAT/RANGE:**

Moist to wet fens, bogs, gravel bars, lakeshores and steambanks in all vegetation zones; frequent in BC in and east of the Coast-Cascade Mountains; N to AK, YT and NT, E to NF and S to ME, MA, PA, OH, IN, IL, TX, NM, AZ and CA.

DESCRIPTION:

General: Perennial, tufted herb from long rhizomes; stems 5-35 cm tall, arising singly or a few together, usually spreading, shorter than the leaves.

Leaves: Sheaths tight; blades 3 to 6 per stem, flat, borne on the lower 1/3 of the stem, 2-4 mm wide, the lower ones slightly reduced.

Flowers: Spikes 3 to 5, the terminal spike stalked, 4-10 mm long, with male flowers, the lower spikes 2 to 4, erect, with female flowers, stalked, the stalks up to 4 cm long; bracts subtending the female spikes sheathless, 3-6 cm long, leaflike, the lower over-topping the inflorescence.

Fruits: Perigynia globe-shaped, 2-3 mm long, 1.5-2.5 mm wide, inflated, bright orange, coarsely ribbed, with a powdery surface, beakless; female scales egg-shaped and pointed to rounded at the tips, shorter and narrower than the perigynia and spreading, reddish-brown, with greenish midribs and translucent margins; stigmas 2, rarely 3; achenes lens-shaped, 1.2-1.4 mm long.

Carex backii Boott**Back's sedge****HABITAT/RANGE:**

Moist to mesic grasslands and alluvial forests in the montane zone; rare in WC BC; E to PQ and NB and S to ME, MA, NY, MI, WI, IA, SD, CO, UT and OR.

DESCRIPTION:

General: Perennial, tufted herb from short, blackish, fibrous roots; stems 5-35 cm tall, varying in length, densely clustered, usually shorter than the leaves, narrowly winged and roughened on the angles, enlarged below the spikes.

Leaves: Sheaths tight, translucent below; blades 2 to 4 per stem, deep green, flat, minutely pimpled, borne on lower 1/4 of the stem, 3-5 mm wide, the lower ones reduced.

Flowers: Spikes 1 to 3, widely separated, from terminal to near basal, 10-15 mm long, with both male and female flowers, the male flowers towards the tips, few, unstalked, inconspicuous, 1-2 mm long, the lower flowers female, 2 to 5, unstalked to short-stalked, erect.

Fruits: Perigynia broadly egg-shaped, 5-6 mm long, 1.6-2.2 mm wide, green or greenish, not inflated in upper 1/3 of body, smooth, nerveless, stalked, the beaks bidentate, stout, smooth, about 2 mm long; female scales greenish, leaflike, 0.5-2 cm long, 4-5 mm wide when flat, folded and keeled, more or less covering the perigynia, long-pointed, the lowermost the longest; stigmas 3; achenes 3-angled, yellowish-green to blackish, granular, 2.5-3.2 mm long.

Notes: This species is closely related to *Carex saximontana*.

*Carex aurea**Carex backii*

Carex bebbii (Bailey) Fern.**Bebb's sedge****HABITAT/RANGE:**

Wet meadows and streamsides in the lowland, steppe and montane zones; common in mainland BC south of 57° N, rare northward, absent from Vancouver Island and the Queen Charlotte Islands; N to AK and NT, E to NF and S to ME, MA, PA, OH, IN, IL, IA, NE, CO, UT, NV and OR.

DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems 20-80 cm tall, exceeding the leaves.

Leaves: Sheaths tight; blades flat, 2-4.5 mm wide, borne on the lower 1/3 of the stem.

Flowers: Spikes 4 to 12, aggregated into a 1- to 3-cm long egg-shaped to cylindrical head, unstalked, with both female and male flowers, the female ones towards the tips; bracts subtending the spikes sheathless, reduced, inconspicuous or the lowest bristlelike.

Fruits: Perigynia egg-shaped, 3-3.5 mm long, 1.5-2 mm wide, dull green to brownish, more or less flattened, the margins winged nearly to the bases, the upper 1/2 fringed with teeth, lightly several-nerved on both sides or nerveless below, the beaks bidentate, less than 1 mm long, narrowly margined and toothed below; female scales elliptical, brownish, with translucent margins, somewhat shorter and narrower than the perigynia; stigmas 2; achenes lens-shaped, about 1 mm long.

Carex bicolor Bell. ex All.**two-coloured sedge****HABITAT/RANGE:**

Moist to wet meadows and shorelines in the montane to alpine zones; rare in N and C BC; circumpolar, N to AK, YT and NT and E to NF; Greenland, Iceland, Eurasia.

DESCRIPTION:

General: Perennial, loosely tufted herb from short rhizomes; stems 5-30 cm tall, longer than the leaves.

Leaves: Sheaths tight; blades 3 to 6 per stem, flat, borne on the lower 1/3 of the stem, 1-2 mm wide, the lower ones reduced.

Flowers: Spikes 3 to 5, 4-10 mm long, borne close together at the top of the stems, with female flowers, except the terminal spike with a few male flowers at the bases, short-stalked; bracts subtending the female spikes with short sheaths, scalelike, the lowermost barely reaching the top of the inflorescence and with blackish earlike lobes at the top of the sheath.

Fruits: Perigynia egg-shaped, 2-3 mm long, 0.7-1 mm wide, inflated, dull green to bluish-white, nerveless, with a powdery surface, beakless; female scales egg-shaped, pointed to rounded at the tips, shorter and narrower than the perigynia, purplish-black to reddish-brown, with greenish midribs and translucent margins; stigmas 2; achenes lens-shaped, 1.2-1.4 mm long.

Carex bigelowii Torr. ex Schwein.**Bigelow's sedge; stiff sedge****HABITAT/RANGE:**

Wet margins of streams and pools in the subalpine and alpine zones; infrequent in N BC; circumpolar, N to AK, YT and NT, E to NF and S to ME, NY, CO and ID; Greenland, Iceland, Eurasia.

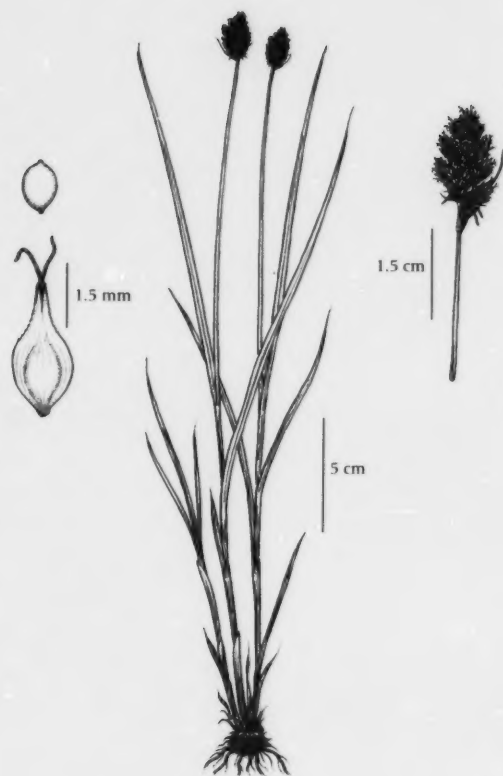
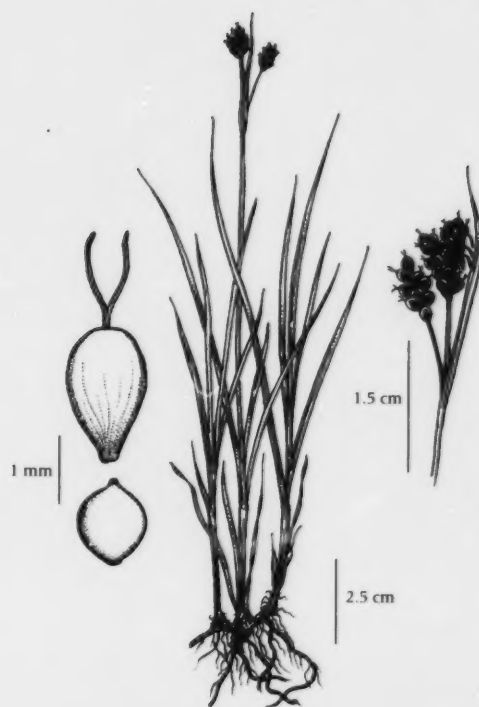
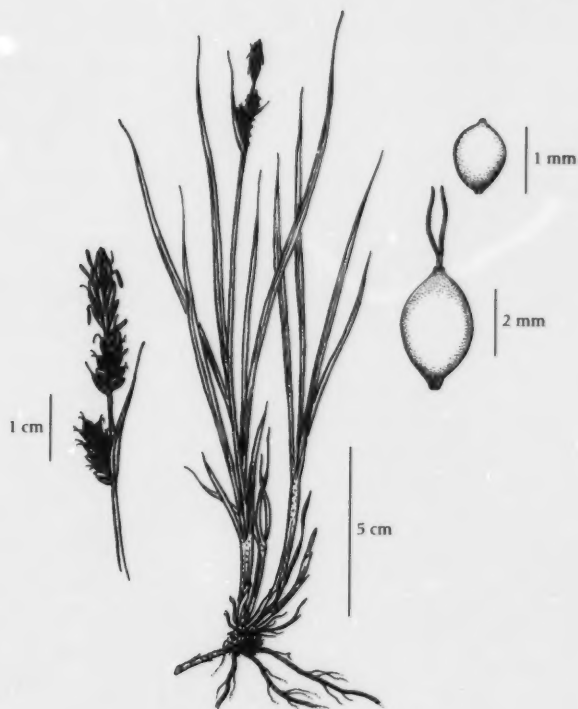
DESCRIPTION:

General: Perennial, clumped herb from short rhizomes; stems triangular with smooth edges, slightly rough below the inflorescence, 5-40 cm tall, exceeding the leaves.

Leaves: Sheaths tight, short; blades flat, the margins rolled-under, well distributed along the stem, 4-6 mm wide, the lower ones slightly reduced.

Flowers: The terminal spike with male flowers, the lower spikes 2 to 3, with female flowers, unstalked or with short stalks, 1-1.5 cm long, erect; lowermost bract subtending the spikes scalelike, sheathless, with black ear-shaped lobes, shorter than the inflorescences, the upper ones reduced.

Fruits: Perigynia egg-shaped, 2-3.6 mm long, 0.8-2 mm wide, brownish-green, 3-angled, the angles rounded, smooth to somewhat wrinkled, beakless; female scales egg-shaped, shorter or longer than the perigynia, brownish-red to purplish-black, with lighter 3-nerved centres and translucent margins; stigmas 2; achenes lens-shaped, 1.1-1.3 mm long.

*Carex bebbii**Carex bicolor**Carex bigelowii*

Carex brevicaulis* Mack. (*C. deflexa* Hornem. var. *brevicaulis* [Mack.] Boivin)*short-stemmed sedge****HABITAT/RANGE:**

Dry, grassy slopes in the lowland zone; locally frequent in SW BC; S to CA.

DESCRIPTION:

General: Perennial herb from an extensive system of branched rhizomes, forming turf-like patches with leaves more conspicuous than the stems; stems 5-10 (15) cm tall, shorter than or sometimes equalling the leaves.

Leaves: Sheaths tight, short; blades flat, smooth or rough, channeled above, borne on the lower 1/3 of the stem, 1-3 mm wide, the lower ones slightly reduced.

Flowers: Spikes 4 to 7, the terminal one unstalked or short-stalked, 6-15 mm long, with male flowers, the lower spikes few-flowered, with female flowers, unstalked to short-stalked, 1 or 2 of these borne near the male spike and 1 or more borne near the base of the stem, erect; bracts subtending the female spikes leaflike, sheathless or short-sheathing, from shorter than to twice as long as the male spike, the upper bracts reduced.

Fruits: Perigynia elliptical to nearly globe-shaped, 2.8-4.2 mm long, 1.3-2 mm wide, green, short-hairy, with 2 prominent lateral nerves, the beaks bidentate, short and inconspicuous to slender and up to 1.5 mm long; female scales egg-shaped and pointed on the upper perigynia to broadly lanceolate and awned on the lower perigynia, equalling or more often shorter than the perigynia, brownish-green, with lighter midribs and translucent margins; stigmas 3; achenes 3-angled, smooth, 1.6-2.1 mm long.

Notes: This species is part of the poorly studied *C. deflexa*/*C. rossii* complex.

Carex brevior* (Dewey) Mack. ex Lunell*short-beaked sedge****HABITAT/RANGE:**

Moist to mesic meadows, forest margins, and streambanks in the steppe and montane zones; infrequent in SC and SE BC; E to PQ, NB and NS and S to ME, MA, VA, TN, MS, TX, NM, AZ, ID and OR.

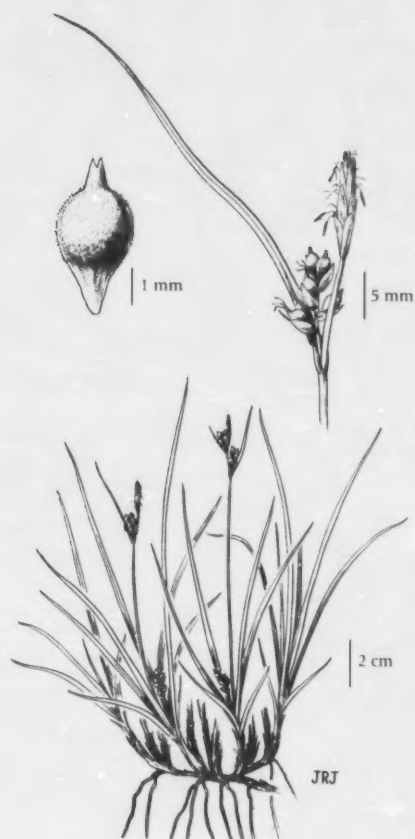
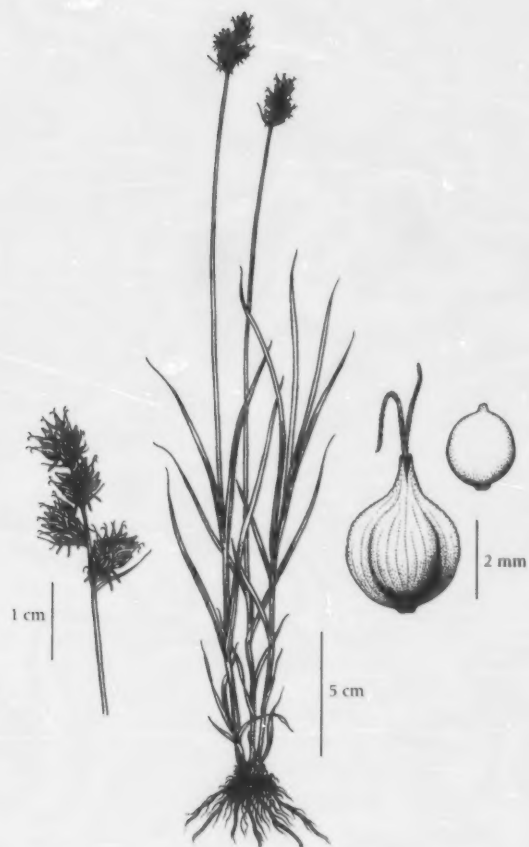
DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems 20-80 cm tall, exceeding the leaves.

Leaves: Sheaths tight; blades flat or folded, 2-4 mm wide, borne on the lower 1/3 of the stem.

Flowers: Spikes 3 to 6, aggregated into a 1- to 5-cm long, often interrupted head, unstalked, with both female and male flowers, the female ones towards the tips; bracts subtending the spikes sheathless, reduced, inconspicuous.

Fruits: Perigynia broadly egg-shaped to nearly globe-shaped, 3.2-4.6 mm long, 2.2-3.5 mm wide, pale green to tan, more or less flattened, the margins winged nearly to the bases and the upper 1/2 fringed with teeth, with nerves on both sides or nerveless below, the beaks shallowly bidentate, less than 1 mm long, narrowly margined and toothed below; female scales elliptical, brownish with translucent margins, somewhat shorter and narrower than the perigynia; stigmas 2; achenes lens-shaped, 1.7-2 mm long.

*Carex brevicaulis**Carex brevior*

Carex brunnescens* (Pers.) Poir. (*C. sphaerostachya* [Tuckerm.] Dewey = ssp. *sphaerostachya* [Tuckerm.] Kalela) brownish sedge*HABITAT/RANGE:**

Bogs, fens and wet sites in forests in the montane and subalpine zones; frequent in N BC, rare in mountains S of 54° N; circumpolar, ssp. *alaskana* – N to AK, YT and NT and E to MB; ssp. *pacifica* – N to AK and S to WA and ID; ssp. *sphaerostachya* – N to NWT, E to NF and S to ME, MS, SC, TN, OK, CO, UT, NV and OR; Eurasia.

DESCRIPTION:

General: Perennial, somewhat tufted herb from short rhizomes; stems 15-70 cm tall, usually longer than the leaves.

Leaves: Sheaths tight; blades numerous, borne on the lower part of the stem, 1-2.5 mm wide, flat, the lowermost leaves often reduced.

Flowers: Spikes 4 to 9 in a 3- to 5-cm long, narrow, interrupted inflorescence, occasionally with a few of the uppermost spikes aggregated into a small cluster, egg-shaped, many-flowered, 4-7 mm long, ascending, with both female and male flowers, the female flowers towards the tips, the male flowers inconspicuous; lowermost bract reduced or rarely awnlike, about 0.5 cm long.

Fruits: Perigynia egg-shaped, 2-3.5 mm long, 0.5-0.8 mm wide, dark green or brownish, minutely whitish-dotted, plano-convex, smooth, lightly nerved on both surfaces, unstalked, the beaks about 0.5 mm long, smooth, cleft on the upper surface; female scales egg-shaped, covering about 2/3 of the perigynia, pointed, green, with green midribs; stigmas 2; achenes lens-shaped, 1.2-1.7 mm long, filling the perigynia.

Notes: This is a variable species whose taxonomy and distribution have not been sufficiently studied. Kalela (1965) distinguished the following three subspecies in British Columbia:

1. Plants densely tufted; stems 15-40 cm long, stiff with short stiff leaves; perigynia 2-2.5 mm long, with a dark brown tinge, the margins without wings, with thick walls, coarsely dotted/pitted ssp. *alaskana* Kalela
1. Plants loosely tufted, stems 30-70 cm long, lax with long, lax leaves; perigynia 2-3.5 mm long, with a purplish or rusty tinge, with winged margins, thin-walled, finely dotted/pitted.
 2. Spikes all separated; perigynia without sharp lateral margins and with faint nerves, light olive-green when ripe; achenes entirely filling the perigynia ssp. *sphaerostachya* (Tuckerm.) Kalela
 2. Spikes forming a terminal head, only the lowermost spike remote; perigynia with weak margins and nerves, olive-brown, with rusty-brown spots when ripe; achenes not entirely filling the perigynia ssp. *pacifica* Kalela

Carex buxbaumii* Wahlenb. (*C. adelostoma* Krecz., *C. canescens* auct. non L.)*Buxbaum's sedge; club sedge****HABITAT/RANGE:**

Bogs, fens, wet shrublands, thickets, shorelines and meadows in the lowland and montane zones; frequent in WC and S BC, absent from N BC except the extreme NW; circumpolar, N to AK and YT, E to NF and S to ME, MA, NJ, PA, SC, TN, AR, KS, CO, UT, NV and CA; Eurasia, Australia.

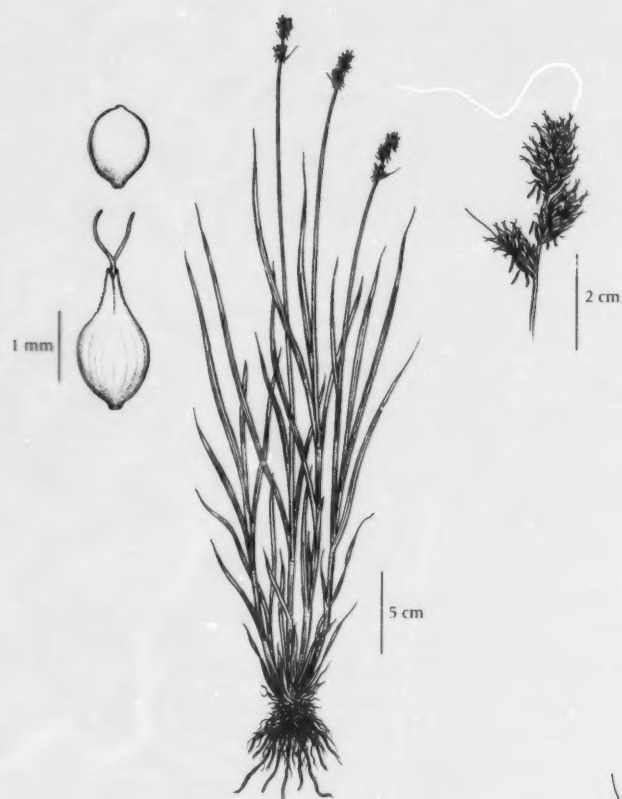
DESCRIPTION:

General: Perennial, tufted herb from slender, creeping rhizomes; stems 30-80 cm tall, exceeding the leaves.

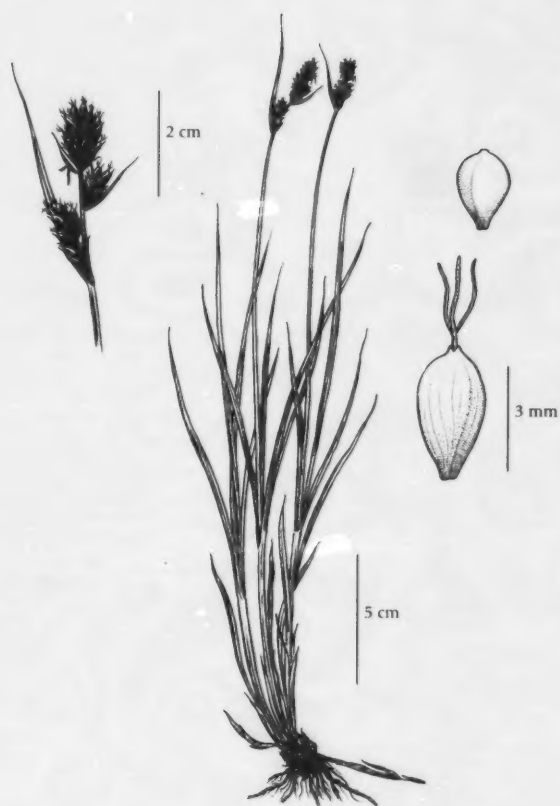
Leaves: Sheaths purplish-red towards the bases; blades flat, 2-4 mm wide, the lower ones reduced, the old sheaths breaking in a feather-like pattern.

Flowers: Spikes usually 2 to 5, the terminal spikes with both female and male flowers, the female ones towards the tips, the lower spikes 1 to 4, with female flowers, short-stalked, 0.6-3 cm long, erect; bracts subtending the spikes short-sheathing, leaflike, about equalling the inflorescence.

Fruits: Perigynia elliptical, 3-4 mm long, 1.5-2 mm wide, bluish-green, finely nerved, the beaks obscure, less than 0.3 mm long; female scales lanceolate, nearly as long as to longer and narrower than the perigynia, awn-tipped, reddish-black, roughly pimpled; stigmas 3; achenes 3-angled, granular, 1.5-1.7 mm long.



Carex brunnescens ssp. *sphaerostachya*



Carex buxbaumii

Carex canescens* L. (*C. curta* Good., *C. cinerea* Poll.)*grey sedge; white sedge****HABITAT/RANGE:**

Bogs, swamps, fens, wet meadows and streambanks in all but the alpine zone; common in S BC, less frequent northward; circumpolar, N to AK, YT and NT, E to Labr. and NF and S to ME, PA, WV, IN, MN, WI, SD, NM, AZ and CA; Greenland, Iceland, Eurasia, S America, Australia, New Guinea.

DESCRIPTION:

General: Perennial, somewhat tufted herb from elongate, fibrous roots; stems 20-60 cm tall, sharply triangular, rough below the inflorescence, about as long as the leaves.

Leaves: Sheaths tight; blades numerous, borne on the lower part of the stem, 2-3 mm wide, flat.

Flowers: Spikes 5 to 10 in a 3- to 5-cm long inflorescence, the upper closer together, egg-shaped, many-flowered, about 5 mm long, ascending, the lower few spikes separate, with both female and male flowers, the female flowers towards the tips, the male flowers inconspicuous; bracts reduced, only the lowermost bract sometimes awnlike, about 0.5-2 cm long.

Fruits: Perigynia egg-shaped, 2.2-2.5 mm long, 0.8-1 mm wide, light green, minutely whitish-dotted, plano-convex, smooth, with several nerves, especially above, unstalked, the beaks short, 0.25 mm long, smooth, not cleft; female scales egg-shaped, almost covering the perigynia, pointed, green, with green midribs; stigmas 2; achenes lens-shaped, 1.2-1.5 mm long, filling the perigynia.

Carex capillaris* L. (*C. chlorostachys* Stevens, *C. fuscicula* Krecz. ex Egor.)*hairlike sedge; hair sedge****HABITAT/RANGE:**

Moist to wet shorelines, bogs, fens, streambanks and seepage slopes in the montane to alpine zones; frequent throughout BC east of the Coast-Cascade Mountains; circumpolar, N to AK, YT and NT, E to Labr. and NF and S to ME, NY, MI, WI, MN, SD, NM, UT, NV and OR; Greenland, Iceland, Eurasia.

DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems 5-20 cm tall, exceeding the leaves.

Leaves: Sheaths tight, brownish to straw-coloured; blades flat, 1-3 mm wide, borne on the lower 1/3 of the stem.

Flowers: Spikes 2 to 5, the terminal one long-stalked, 4-10 mm long, with male flowers, the lower 2 to 4 spikes with female flowers, long-stalked, spreading or nodding; bracts subtending the female spikes tubular-sheathed, leaflike, the lower bracts longer than the spikes and their stalks, the upper one reduced.

Fruits: Perigynia lanceolate to egg-shaped, 2-3.3 mm long, 1-1.5 mm wide, green to greenish-brown, convex, smooth or fringed above with teeth, 2-nerved, short-stalked, the beaks bidentate, 0.3-0.6 mm long; female scales egg-shaped, rounded to pointed, brownish, with green centres and translucent margins, shorter but often wider than the perigynia; stigmas 3; achenes 3-angled, 1.2-1.5 mm long.

Carex capitata* L. (*C. arctogena* H. Sm.)*capitate sedge****HABITAT/RANGE:**

Bogs and moist to dry, rocky slopes, streambanks and seepage slopes in the subalpine and alpine zones; frequent throughout BC in and E of the Coast-Cascade Mountains; circumpolar, N to AK, YT and NT, E to NF and S to NH, UT, NM, CA and MX; Greenland, Iceland, Eurasia, disjunct to S South America.

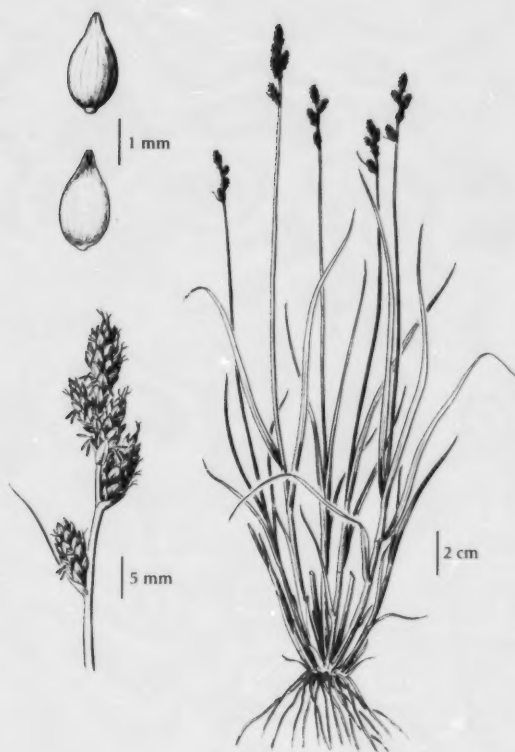
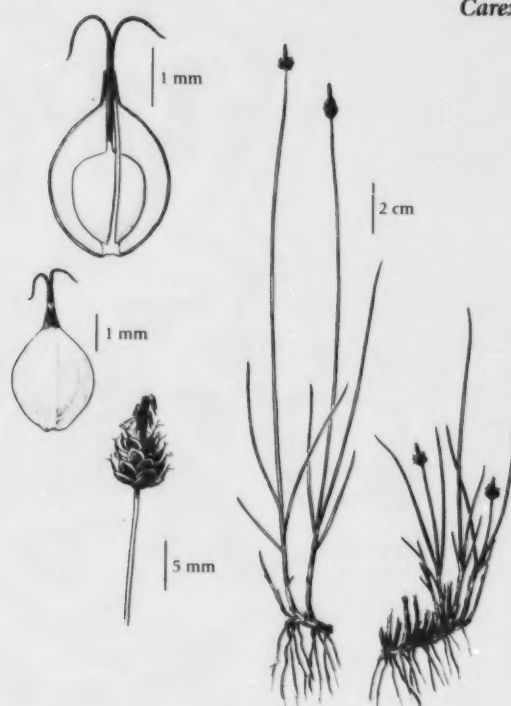
DESCRIPTION:

General: Perennial, tufted herb from short rhizomes; stems 10-35 cm tall, equalling or much longer than the leaves.

Leaves: Sheaths blunt at the tips with short ligules; blades 2 to 4 per stem from near the bases, thread-like, about 1 mm wide, the lower ones lacking or reduced to scales.

Flowers: Spikes solitary, globe- or egg-shaped, 5-15 mm long, 3-7 mm wide, erect, with both female and male flowers, the male flowers towards the tips; bractless.

Fruits: Perigynia egg- to nearly globe-shaped, 2-3.5 mm long, about 1.5 mm wide, pale green, flattened, smooth, nerveless on the fronts, finely few-nerved on the backs, unstalked, the beaks 0.3-0.7 mm long, bidentate; female scales egg-shaped, slightly shorter than the perigynia, round-tipped, dark brown, the margins translucent; stigmas 2; achenes lens-shaped, 1.2-2 mm long.

*Carex canescens**Carex capillaris**Carex capitata*

Carex chordorrhiza Ehrh. ex L.f.

cordroot sedge; string sedge

HABITAT/RANGE:

Bogs and fens in the montane zone; common in C BC, rare southward; circumpolar, N to AK, YT and NT, E to NF and S to VT, IN and IA; Iceland, Eurasia.

DESCRIPTION:

General: Perennial herb from long rhizomes and/or stolons; stems 10-30 cm tall, arising singly, branched at the bases into several sterile shoots, much longer than the leaves.

Leaves: Sheaths purplish, reddish-brown or straw-coloured, the lower ones lacking blades; blades 1 to 3 from near the bases, 1-5 cm long, 1-2 mm wide, flat or sometimes folded.

Flowers: Spikes 3 to 5, egg-shaped, 5-12 mm long, 3-4 mm wide, erect, clustered, with both female and male flowers, the male flowers towards the tips; lowermost bract scalelike.

Fruits: Perigynia egg-shaped, 2.5-3.5 mm long, 1.8-2.2 mm wide, yellowish-brown or brownish, thick, convex, smooth, shiny, strongly nerved, wingless, short-stalked, the beaks short, 0.3-0.5 mm long; female scales egg-shaped, slightly longer than the perigynia, pointed, brown, the margins translucent; stigmas 2; achenes lens-shaped, 1.2-2 mm long.

Carex circinata C.A. Mey.

coiled sedge

HABITAT/RANGE:

Moist cliffs, ridges and talus slopes in the subalpine and alpine zones; infrequent in south-coastal BC, frequent in the Queen Charlotte Islands and adjacent mainland, rare in the Coast-Cascade Mountains; N to AK and S to NW WA.

DESCRIPTION:

General: Perennial, tufted herb from short-creeping rhizomes; stems 5-25 cm tall, exceeding the leaves.

Leaves: Sheaths light brown, the lower ones bladeless; blades several on each stem, crowded toward the bases, thread-like, the margins in-rolled, 0.5-1 mm wide, typically curving or arching.

Flowers: Spikes solitary, lanceolate to cylindrical, 1.5-2.5 cm long, 2-4 mm wide, erect, with both female and male flowers, the male flowers towards the tips; bractless.

Fruits: Perigynia few, lanceolate, 4.5-6 mm long, 1-1.5 mm wide, erect to ascending, reddish-tinged, obscurely compressed-triangular, smooth, nerved, 2 of these prominent, stalked, narrowly wing-margined, the beaks bidentate, about 1 mm long; female scales lanceolate, slightly shorter than the perigynia, the lower ones awn-tipped, the upper ones round-tipped, with broad, green or straw-coloured midribs and brown margins; stigmas 3; achenes 3-angled, smooth, 1.3-1.7 mm long.

Carex comosa Boott

bearded sedge

HABITAT/RANGE:

Shorelines and wet meadows in the lowland, steppe and montane zones; rare in SW and SC BC; E to PQ, NB and NS and S to AR, SC, GA, FL, ID and CA.

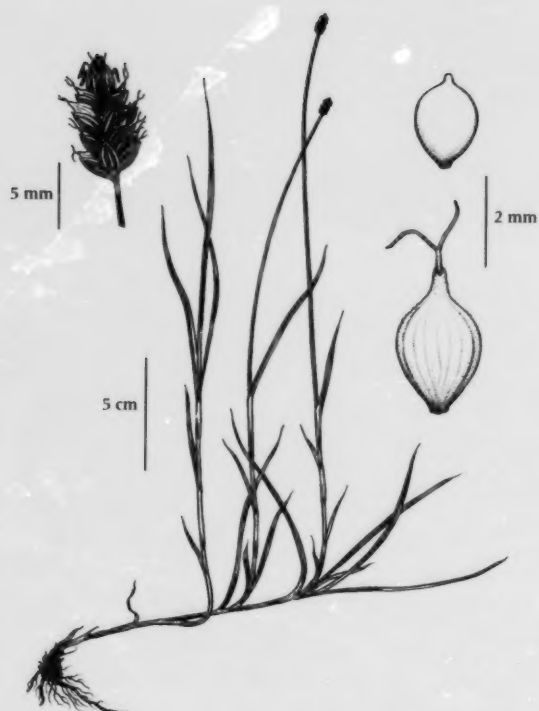
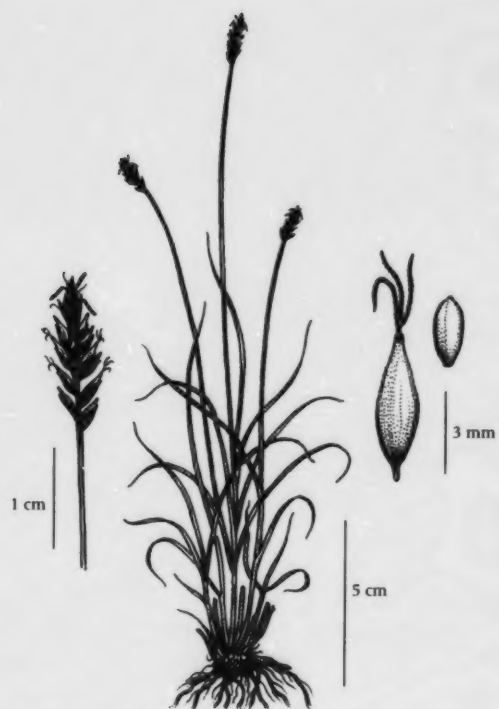
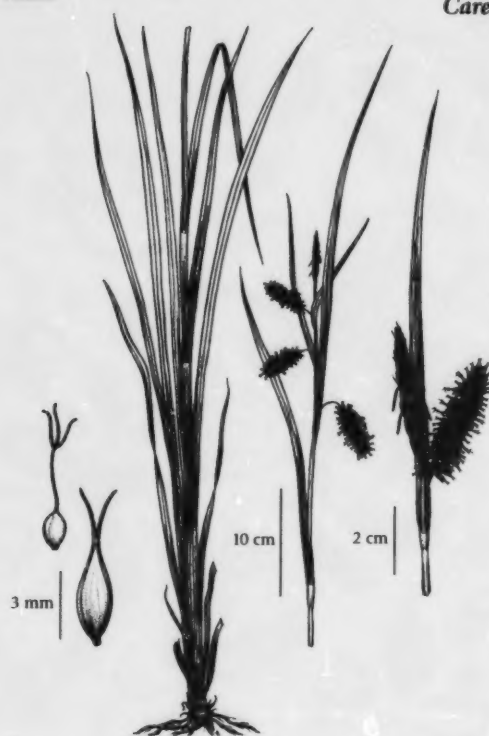
DESCRIPTION:

General: Perennial, densely tufted herb from short, stout rhizomes; stems 50-100 cm tall, shorter than the leaves.

Leaves: Sheaths light brown, the lower ones bladeless; blades several on each stem, flat, 4-11 mm wide, cross-walled, especially on the sheaths.

Flowers: Spikes 4 to 7, the terminal one lanceolate, 2-6 cm long, with male flowers, the lower 3 to 6 spikes, cylindrical, with female flowers, long-stalked, spreading or nodding; bracts subtending the female spikes tubular-sheathed, leaflike, lower bracts much longer than the inflorescence, the upper ones reduced.

Fruits: Perigynia lanceolate to narrowly egg-shaped, 5-7.5 mm long, 1.1-1.6 mm wide, pale greenish, convex, smooth above, 15- to 20-nerved, numerous, crowded, spreading or directed downward, short-stalked, the beaks almost as long as the body, bidentate, the teeth 1.2-2.3 mm long, curved outward; female scales egg-shaped, translucent, much shorter than the perigynia, the midribs extending into long rough awns, the awns almost twice as long as the scales; stigmas 3; achenes 3-angled, 1.2-1.8 mm long.

*Carex chordorrhiza**Carex circinata**Carex comosa*

Carex concinna R. Br.

low northern sedge

HABITAT/RANGE:

Moist to dry forests in the montane and subalpine zones; common throughout BC east of the Coast-Cascade Mountains; N to AK, YT and NT, E to NF and S to MI, WI, SD, CO and OR.

DESCRIPTION:

General: Perennial, loosely tufted herb from slender, scaly rhizomes; stems 5-15 (20) cm tall, usually much longer than the leaves.

Leaves: Sheaths light brown, the lower ones bladeless and thread-like; blades 5 to 9 per stem, flat, the margins rolled-under, gradually tapering to the tips, 1-3 mm wide.

Flowers: Spikes 3 or 4, the terminal one lanceolate, 3-7 mm long, with male flowers, the lower 2 or 3 spikes shortly cylindrical, 4-8 mm long, unstalked or short-stalked, with female flowers, erect; bracts subtending the female spikes reduced to bladeless sheaths, 1 cm long or less.

Fruits: Perigynia broadly egg-shaped, 3-3.5 mm long, 1-1.3 mm wide, pale greenish or straw-coloured, 3-angled, stiff-hairy, 2-ribbed and several-nerved, 5 to 12, crowded, erect, short-stalked, the beaks 0.3-0.7 mm long, bidentate; female scales broadly egg-shaped, brown, with translucent margins, much shorter than the perigynia; stigmas 3; achenes 3-angled, 1.4-2 mm long.

Carex concinnoides Mack.

northwestern sedge

HABITAT/RANGE:

Moist to dry forests, rocky slopes and clearings in the lowland and montane zones; common in SC and SE BC east of the Coast-Cascade Mountains, less frequent northward to 56° N, rare on the coast; E to SW AB and S to MT, ID and N CA.

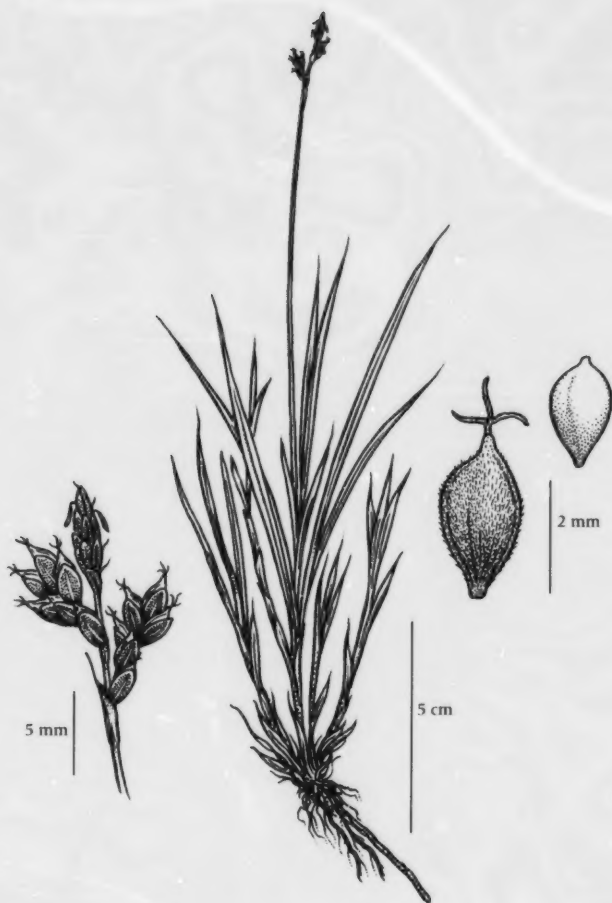
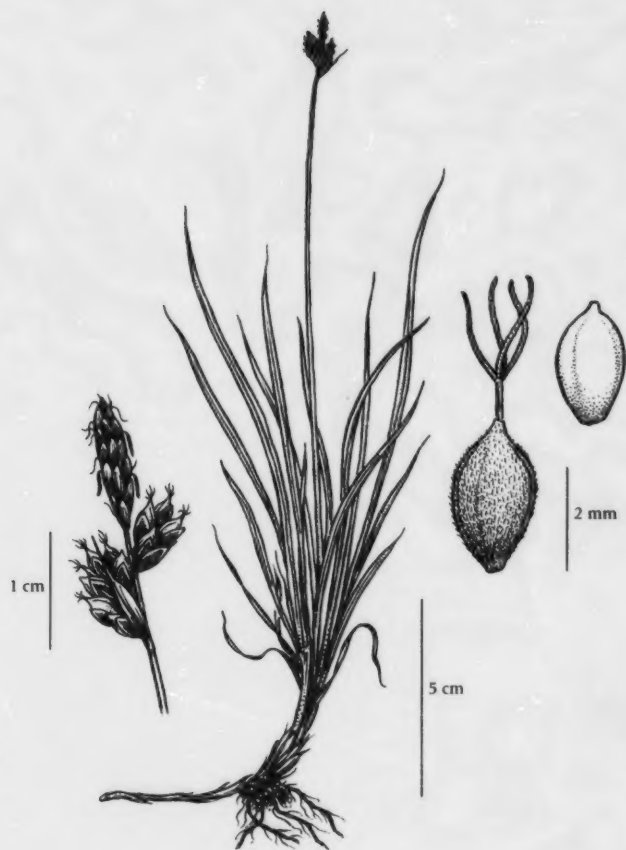
DESCRIPTION:

General: Perennial, loosely tufted herb from slender, scaly rhizomes; stems 15-35 cm tall, from shorter than to longer than the leaves.

Leaves: Sheaths reddish-tinged, the lower ones bladeless and thread-like; blades 6 to 10 per stem, flat or somewhat channeled, gradually tapering to the tips, 2-5 mm wide.

Flowers: Spikes 2 or 3, the terminal one linear, 8-22 mm long, with male flowers, the lower 1 or 2 spikes linear to cylindrical, 5-10 mm long, unstalked or short-stalked, with female flowers, erect; bracts subtending the female spikes reduced to awn-tipped sheaths.

Fruits: Perigynia broadly egg-shaped, 2.5-3 mm long, 1.2-1.5 mm wide, light green, 3-angled, densely hairy, obscurely several-nerved, crowded, erect, short-stalked, the beaks bidentate, about 0.5 mm long or less; female scales narrowly egg-shaped, brown, with wide translucent margins, slightly longer to slightly shorter than the perigynia; stigmas 4, rarely 3; achenes 3-angled, 2-5 mm long.

*Carex concinna**Carex concinnoides*

Carex crawei Dewey

Crawe's sedge

HABITAT/RANGE:

Moist to wet calcareous meadows and marl fens in the montane zone; rare in SE BC; E to PQ and NB and S to ME, VA, GA, AR, OK, CO, UT and WA.

DESCRIPTION:

General: Perennial herb from slender, long-creeping rhizomes; stems solitary or few, 10-30 (40) cm tall, exceeding the leaves.

Leaves: Sheaths tight, translucent towards the stems; blades 6 to 12 per stem, flat or nearly so, gradually tapering to the tips, 1.5-3 mm wide.

Flowers: Spikes 3 to 5, the terminal one lanceolate, 1-3 cm long, with male flowers, the lower 2 to 4 spikes cylindrical, 1-3 cm long, remote, long-stalked below, short-stalked above, with female flowers, erect; bracts subtending the female spikes leaflike, 2 to 3 times the length of the spikes, sheathing, the sheaths 5-15 mm long.

Fruits: Perigynia elliptical or broadly egg-shaped, 2.5-3.5 mm long, 1.3-2 mm wide, reddish-brown, the margins translucent, the centres greenish, plano-convex, smooth, obscurely 15- to 35-nerved, crowded, erect to ascending, unstalked, the beaks slightly bidentate, 0.2-0.4 mm long; female scales broadly egg-shaped, yellowish-green to reddish-brown with translucent margins and green centres, narrower and 1/2 the length of the perigynia; stigmas 3; achenes 3-angled, 1.7-2 mm long.

Carex crawfordii Fern.

Crawford's sedge

HABITAT/RANGE:

Moist to wet meadows in the lowland, steppe and montane zones; common throughout BC south of 56° N, rare northward and on the W slopes of the Coast-Cascade Mountains; N to AK, YT and NT, E to NF, and S to MA, PA, MI, IL, MO, MT, ID and OR.

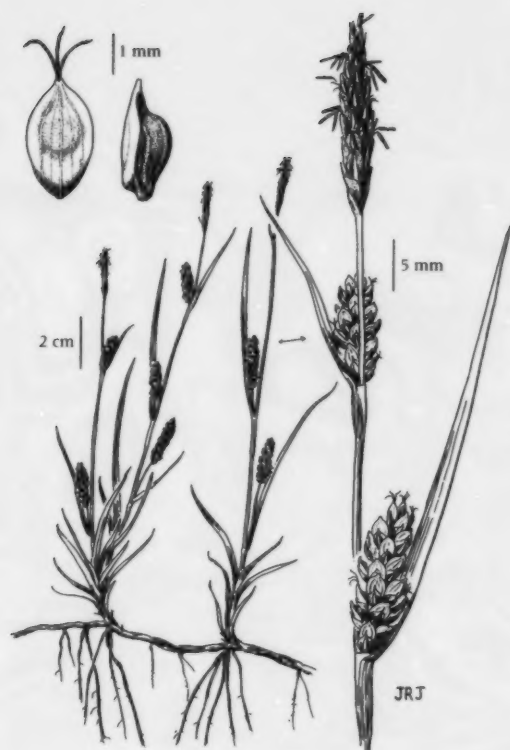
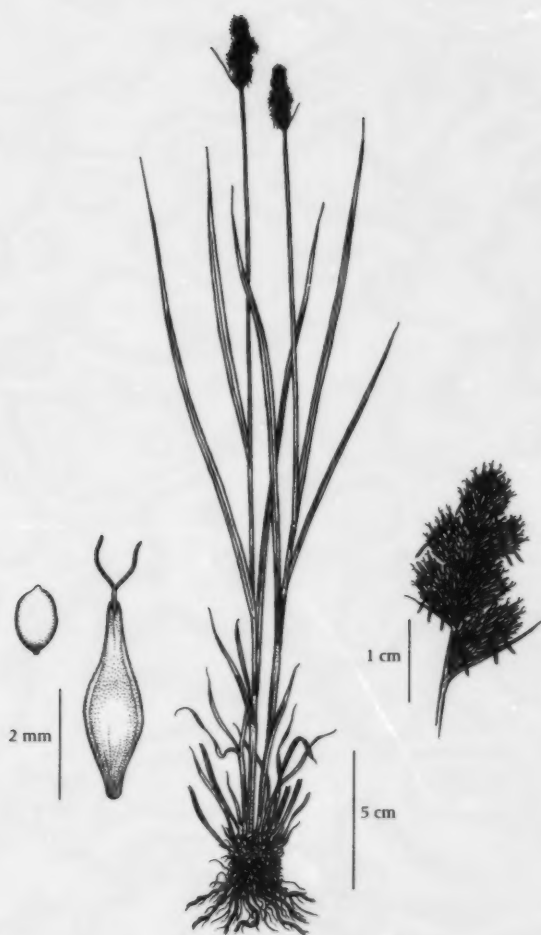
DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems 20-70 cm tall, exceeding the leaves.

Leaves: Sheaths tight; blades flat, 1-3.5 mm wide, borne on the lower 1/3 of the stems.

Flowers: Spikes 6 to 12, aggregated into a compact, narrow head 1-3 cm long, unstalked, with both female and male flowers, the female ones towards the tips; bracts subtending the spikes sheathless, reduced, inconspicuous.

Fruits: Perigynia narrowly lanceolate, 3.3-4 mm long, 0.8-1 mm wide, pale green or straw-coloured, more or less flattened, the margins narrowly winged nearly to the bases, the upper 1/2 fringed with teeth, lightly several-nerved on both sides, the beaks shallowly bidentate, 1 mm long, narrowly margined and toothed below; female scales elliptical, pointed, brownish with translucent margins, somewhat shorter and narrower than the perigynia; stigmas 2; achenes lens-shaped, 1 mm long.

*Carex crawei**Carex crawfordii*

Carex cusickii Mack. ex Piper & Beattie (*C. diandra* Schrank var. *ampla* [Bailey] Kükenth.)**Cusick's sedge**

HABITAT/RANGE:

Bogs, fens, marshes and lake margins in the lowland and montane zones; frequent in S BC, less frequent N to 55° N; S to WY, UT and CA.

DESCRIPTION:

General: Perennial, somewhat tufted herb from fibrous roots; stems 20-100 cm tall, longer than the leaves.

Leaves: Sheaths coppery-coloured towards the tips, conspicuously red-dotted with glandular projections on the side nearest the stem, the blades of the lower ones large, firm, persistent; blades 3 or 4 per stem, borne mostly from near the bases, 2.5-6 mm wide, flat, the margins rolled-under.

Flowers: Spikes numerous, clustered in several aggregated heads, in a 3.5-8 cm long, dense, branched inflorescence, egg-shaped, few-flowered, 4-7 mm long, 3-4 mm wide, erect to ascending with both female and male flowers, the male flowers towards the tips; bracts inconspicuous, sheathless, often similar to the female scales.

Fruits: Perigynia narrowly triangular to egg-shaped, 2.5-4 mm long, about 1.2-1.5 mm wide, straw-coloured to brown, biconvex, smooth, strongly nerved on the outside, short-stalked, the beaks as long as the bodies, winged, the margins fine-toothed; female scales egg-shaped, equalling or slightly longer than the perigynia, pointed, brown, the margins translucent; stigmas 2; achenes lens-shaped, 1.2-1.4 mm long.

Carex deflexa Hornem.**bent sedge; short-stemmed sedge**

HABITAT/RANGE:

Mesic meadows and forest openings in the montane and subalpine zones; frequent in BC east of the Coast-Cascade Mountains, infrequent on the coast; N to AK and YT, E to NF and S to MA and MI.

DESCRIPTION:

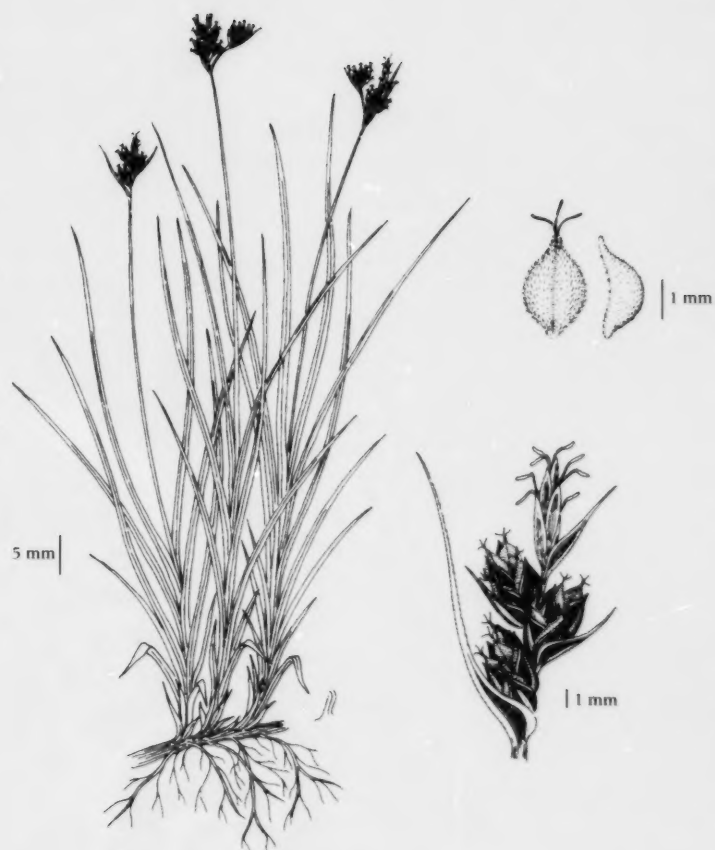
General: Perennial, loosely tufted herb from slender, creeping, branched rhizomes; stems 5-25 cm tall, densely clustered, longer than or sometimes equalling the leaves, purple-tinged at the bases.

Leaves: Sheaths tight, persistent; blades flat, channeled above, smooth or somewhat rough, borne on the lower 1/3 of the stem, 1-2 mm wide, the lower ones slightly reduced.

Flowers: Spikes 2 to 6, the terminal one unstalked or short-stalked, 2-5 cm long, with male flowers, the lower spikes few-flowered, with female flowers, unstalked to short-stalked, 2 to 4 of these borne near the male spike and 1 or more usually borne near the bases of the stems, erect; bracts subtending the female spikes leaflike, sheathless or short-sheathing, shorter than to 4 times as long as the male spike, longer than the inflorescence, the upper bracts reduced.

Fruits: Perigynia elliptical to broadly egg-shaped, 2-3 mm long, 0.5-1.5 mm wide, greenish to straw-coloured, convex, finely short-hairy, with 2 prominent marginal nerves, the bases short-stalked, the beaks short and inconspicuous to slender and 0.4-0.7 mm long, bidentate; female scales egg-shaped and pointed on the upper perigynia to broadly lanceolate and awned on the lower perigynia, usually shorter and somewhat wider than the perigynia, purplish-brown, with lighter midribs and translucent margins; stigmas 3; achenes 3-angled, smooth, 1.5-2 mm long.

Notes: Closely related to *C. rossii*, these two taxa are sometimes considered conspecific. In that case *C. deflexa* (the oldest name in the complex) is used in a broad sense (e.g., Taylor 1983).

*Carex cusickii**Carex deflexa*

Carex deweyana Schwein. (*C. leptopoda* Mack. = var. *leptopoda*; *C. bolanderi* Olney = var. *bolanderi*)

Dewey's sedge

HABITAT/RANGE:

Wet to moist alluvial forests, forest margins, streambanks, meadows (vars. *bolanderi* and *leptopoda*) and clearings (var. *deweyana*) in the lowland, steppe, and montane zones; common in BC south of 55° N, infrequent northward; var. *deweyana* – N to AK and YT, E to NF and S to MA, NY, PA, IL, IA, SD, NM, UT and NV; var. *bolanderi* and var. *leptopoda* – N to AK and YT, E to NF and S to NM, AZ and CA.

DESCRIPTION:

General: Perennial, somewhat to densely tufted herb from fibrous roots or short rhizomes; stems 20-120 cm tall, exceeding the leaves.

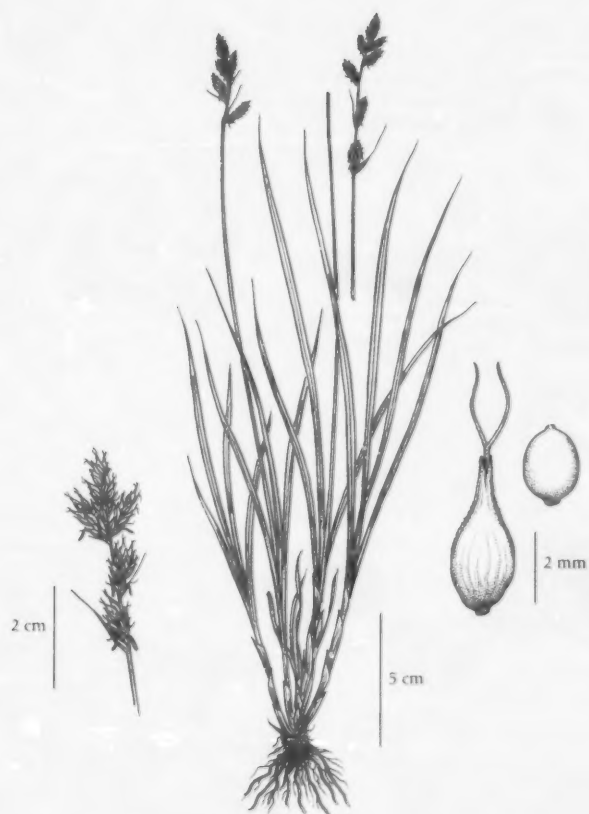
Leaves: Sheaths tight; blades numerous, borne on the lower part of the stems, 2-5 mm wide, flat.

Flowers: Spikes 2 to 8 in a 2- to 8-cm long, flexuous head, the spikes separate below, the upper ones congested, cylindrical or egg-shaped, many-flowered, 7-20 mm long, ascending, with both female and male flowers, the female flowers towards the tips, the male flowers inconspicuous; bracts inconspicuous and like the scales or the lower ones longer and bristlelike.

Fruits: Perigynia cylindrical to lanceolate, 3.5-5.5 mm long, 1-2 mm wide, pale green, biconvex, smooth, obscurely nerved below, tapered and stalked to rounded and spongy at the bases, the walls thin papery, the beaks 1/2 the length of the bodies, shallowly to deeply bidentate, finely toothed at the bases, the margins fine-toothed; female scales egg-shaped, shorter than, equalling, or slightly longer and equalling to wider than the perigynia, pointed, brown to reddish-brown, the margins translucent; stigmas 2; achenes lens-shaped, 1.5-2.5 mm long.

Notes: Some authors (Cronquist 1969, Taylor 1983) have merged *C. bolanderi* and *C. leptopoda* with *C. deweyana* while others have treated them either as varieties of the latter (Taylor and MacBryde 1977, Boivin 1992, Douglas and Ceska 1994) or at the specific level (Hermann 1970, Scoggan 1978, Hickman 1993, Kartesz and Meacham 1999). In this treatment we are recognizing these taxa at the varietal level:

1. Rootstocks rarely elongate, the stems usually densely tufted; perigynia rounded at the bases, 4.5-5.5 mm long, the beaks shallowly bidentate, the upper part of the bodies covered by the translucent scales; achenes 2-2.5 mm long var. *deweyana*
1. Rootstocks slender, elongate, the stems various; perigynia tapering at the bases, stalked, 3.5-4.5 mm long, the beaks shallowly to deeply bidentate, the upper part of the bodies either covered or not by the translucent scales; achenes 1.5-1.8 mm long.
 2. Beaks of the perigynia shallowly bidentate, the upper part of the bodies not covered by the translucent scales; spikes egg-shaped or cylindrical; scales not reddish brown-tinged var. *leptopoda* (Mack.) Boivin
 2. Beaks of perigynia deeply bidentate, the upper part of the bodies covered by the translucent scales; spikes narrowly cylindrical; scales usually reddish brown-tinged var. *bolanderi* (Olney) W. Boott

*Carex deweyana* var. *leptopoda**Carex deweyana* var. *deweyana*

Carex diandra Schrank

lesser-panicled sedge; lesser tussock sedge

HABITAT/RANGE:

Bogs, swamps and fens in all but the alpine zone; common in BC in and east of the Coast-Cascade Mountains, rare in SW BC; circumboreal, N to AK, YT and NT, E to NF and S to NH, PA, OH, IL, IN, MO, NE, NM, UT, NV and CA; Iceland, Eurasia.

DESCRIPTION:

General: Perennial, somewhat tufted herb from fibrous roots; stems 30-100 cm tall, roughened on the angles, longer than the leaves.

Leaves: Sheaths not coppery-coloured, conspicuously red-dotted with glandular projections on the side nearest the stems, the blades of the lower ones large, firm, persistent; blades 3 or 4 per stem, mostly from near the base, 1-2.5 (3) mm wide, flat, the margins rolled-under.

Flowers: Spikes numerous in a 2- to 5-cm long, narrow head, egg-shaped, few-flowered, 4-5 mm long, 3-4 mm wide, erect or mostly ascending, with both female and male flowers, the male flowers towards the tips; bracts inconspicuous, sheathless, often similar to the female scales.

Fruits: Perigynia broadly egg-shaped, 2.5-3 mm long, 1-1.3 mm wide, straw-coloured to usually dark brown, biconvex, smooth, strongly nerved on the outside, short-stalked, the beaks as long as the bodies, slightly bidentate, not winged, the margins obscurely fine-toothed; female scales egg-shaped, equalling or slightly longer than the perigynia, pointed, brown, the margins translucent; stigmas 2; achenes lens-shaped, 1.2-1.4 mm long.

Carex disperma Dewey

soft-leaved sedge

HABITAT/RANGE:

Bogs, fens, swamps, wet meadows and moist to wet forests in all but the alpine zone; common in BC east of the Coast-Cascade Mountains, rare in coastal BC; circumpolar, N to AK, YT and NT, E to NF and S to NJ, PA, MN, SD, UT, AZ, NM and CA; Eurasia.

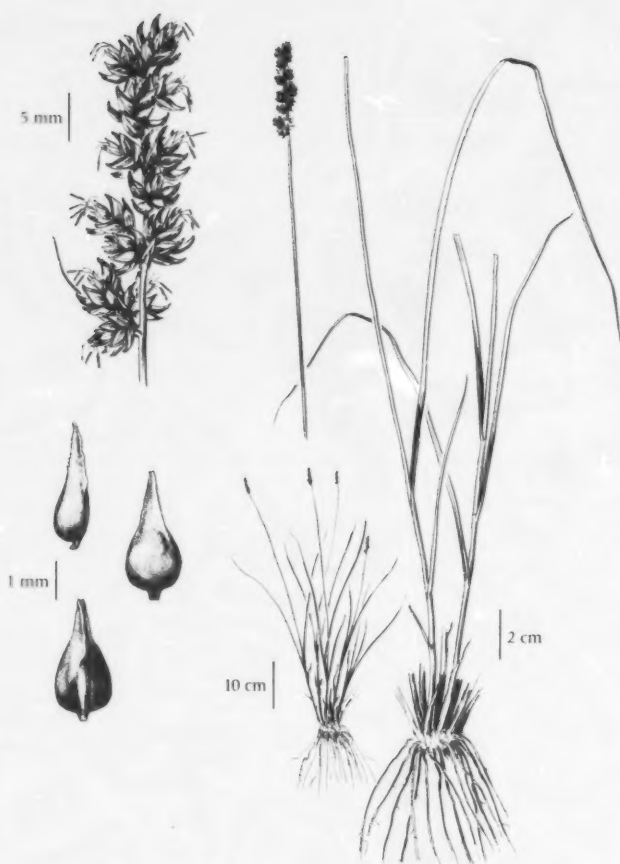
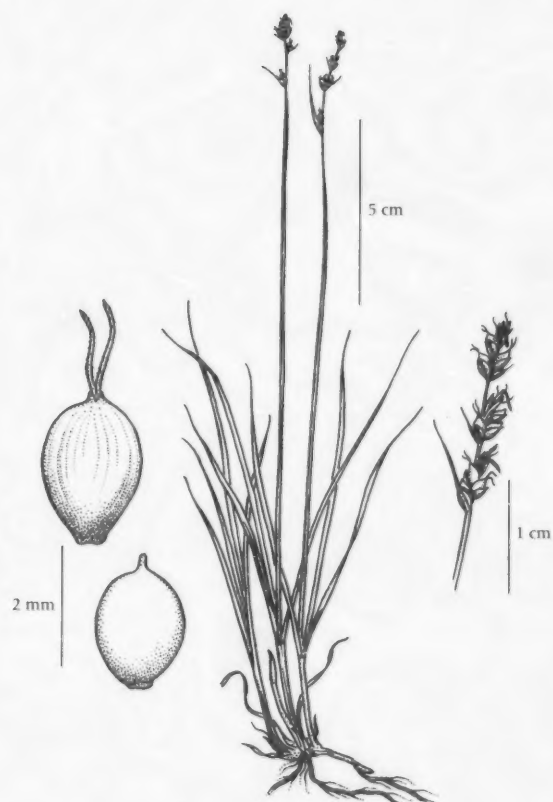
DESCRIPTION:

General: Perennial, loosely tufted herb from rhizomes and elongated, light brown stolons; stems 15-60 cm tall, slender and arching, shorter than or about as long as the leaves.

Leaves: Sheaths tight; blades numerous, borne on the lower part of the stems, 0.7-1.2 mm wide, flat.

Flowers: Spikes 5 to 10 in a long inflorescence, separated, the uppermost closer together, egg-shaped, 1- to 6-flowered, about 5 mm long, ascending, with both female and male flowers, the female flowers towards the base, the male flowers inconspicuous; bracts reduced, only the lowermost bract often awnlike, about 0.5-2 cm long.

Fruits: Perigynia elliptical, 2.2-3 mm long, 0.8-1.5 mm wide, light green, minutely whitish-dotted, biconvex, smooth, 1- or 2-ribbed, beakless; female scales egg-shaped, covering 1/2 of the perigynia, pointed, green, with green midribs; stigmas 2; achenes lens-shaped, 1.5-1.7 mm long, filling the perigynia.

*Carex diandra**Carex disperma*

Carex douglasii Boott**Douglas' sedge**

HABITAT/RANGE:

Moist to dry, often alkaline, meadows and grassy slopes in the steppe and montane zones; infrequent in SC and SE BC; E to S MB and S to MO, NE, NM, AZ and CA.

DESCRIPTION:

General: Perennial herb from slender, long-creeping rhizomes; stems 10-30 (40) cm tall, arising singly or a few together or sometimes matted, usually exceeding the leaves.

Leaves: Sheaths tight, brownish or blackish at the bases; blades 3 to 8 per stem, in-rolled on the uppersides or sometimes flat, gradually tapering to the tips, 1-2.5 mm wide.

Flowers: Spikes usually either male or female on separate plants, the male inflorescence with many aggregated spikes in a narrowly cylindrical to broadly egg-shaped head, the female inflorescence with many aggregated, but distinguishable, spikes in a cylindrical to nearly globe-shaped head, 1.5-5 cm long, unstalked; bracts of the lowest spike leaflike and longer than the spike, those above reduced and much like the scales.

Fruits: Perigynia narrowly egg-shaped, 3.5-4.5 mm long, 1.6-1.9 mm wide, straw-coloured to brownish, smooth, obscurely many-nerved, crowded, erect, unstalked, the beaks bidentate, 1-1.5 mm long, finely toothed; female scales lanceolate, straw-coloured to light brown, with translucent margins and green centres, wider and longer than the perigynia; stigmas 2; achenes lens-shaped, 1.7-1.8 mm long.

Carex duriuscula C.A. Mey. (*C. eleocharis* Bailey, *C. stenophylla* Wahlenb. ssp. *eleocharis* [Bailey] Hult., *C. stenophylla* var. *enervis* Kükenth.)

narrow-leaved sedge

HABITAT/RANGE:

Moist to dry, often alkaline, grassy or rocky slopes in the steppe and montane zones; infrequent in C and SE BC, rare in NE BC; N to AK, YT and NT, E to MB and S to IL, MO, KS, NM, AZ and CA.

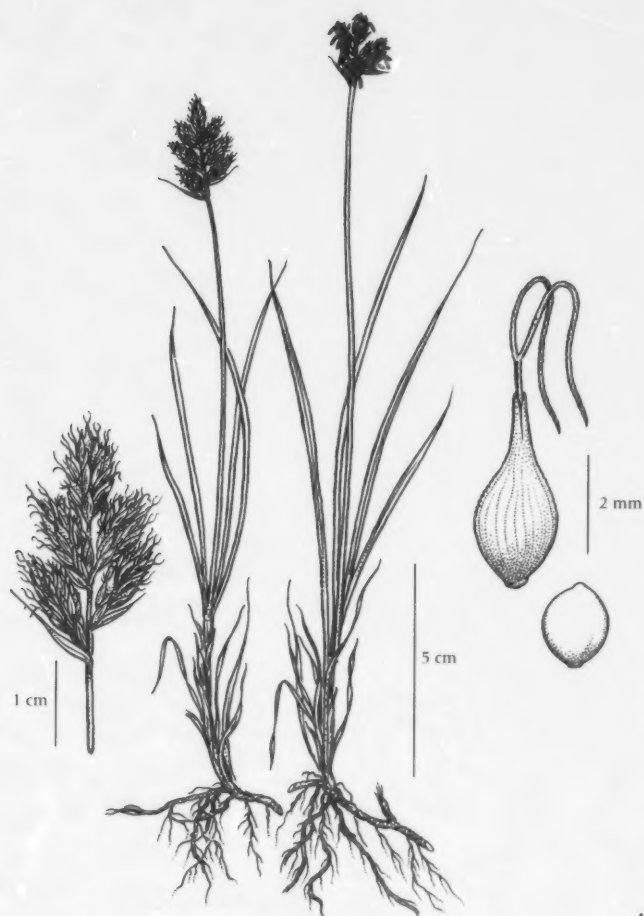
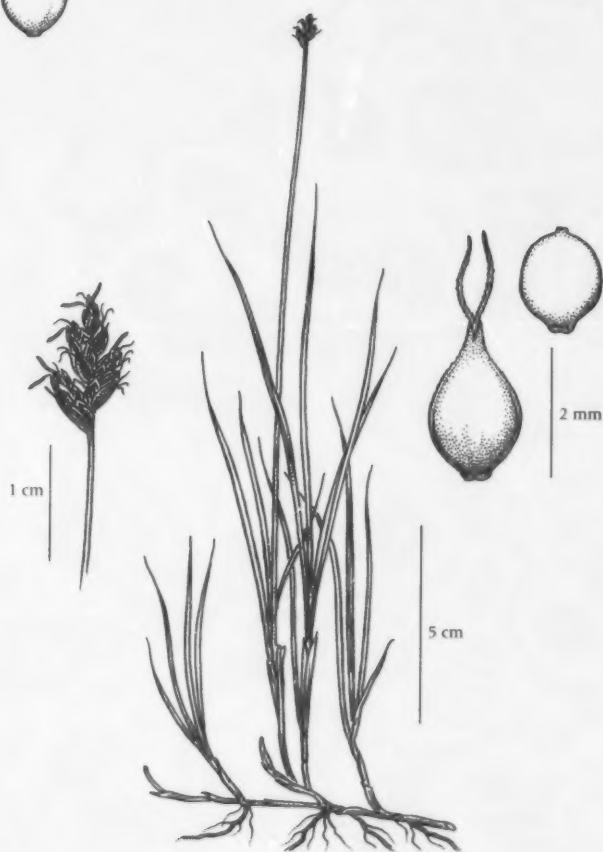
DESCRIPTION:

General: Perennial herb from long-creeping rhizomes; stems 5-20 cm tall, arising singly or a few together, exceeding the leaves.

Leaves: Sheaths green, the lower ones bladeless; blades 1 to 4 per stem, crowded toward the base, flat or more often channeled, the margins sometimes in-rolled, 0.3-1.5 mm wide.

Flowers: Spikes densely aggregated into an egg-shaped, 5- to 20-mm long head, the spikes scarcely distinguishable, 4-9 mm long, unstalked, with both female and male flowers, the male flowers towards the tips; bracts inconspicuous and like the scales.

Fruits: Perigynia few, narrowly to broadly egg-shaped, 2.5-3.5 mm long, 1.5-2 mm wide, appressed ascending, brown, obscurely biconvex, smooth, nerveless or often more or less several-nerved, short-stalked, the beaks bidentate, finely toothed, 1/3 to 1/4 the length of the bodies; female scales broadly egg-shaped, as long as and slightly wider than the perigynia, the lower ones awn-tipped, the upper ones round-tipped, light to medium brown, the margins translucent; stigmas 2; achenes lens-shaped, smooth, 1.5-1.8 mm long.

*Carex douglasii**Carex duriuscula*

Carex eburnea Boott

bristle-leaved sedge

HABITAT/RANGE:

Dry, often calcareous, gravelly or rocky sites in the montane zone; frequent throughout E BC (Rocky Mountains); N to AK, YT and NT, E to NF and S to ME, PA, NC, GA, AL, TX and CO.

DESCRIPTION:

General: Perennial, tufted herb from long rhizomes; stems 10-35 cm tall, arising singly or a few together, longer than the leaves, reddish-tinged at the bases.

Leaves: Sheaths tight; blades 3 to 6 per stem, in-rolled, smooth, borne on the lower 1/3 of the stems, less than 0.5 mm wide, the lower ones slightly reduced.

Flowers: Spikes 3 to 5, the terminal one stalked, 4-8 mm long, with male flowers, the lower spikes 2 to 4, erect, 2- to 6-flowered, with female flowers, long-stalked, the stalks 6-15 mm long; bracts subtending the female spikes tubular-sheathing, 4-6 mm long, bladeless.

Fruits: Perigynia egg-shaped to elliptical, 1.7-2 mm long, 0.7-1 mm wide, 3-angled, membranaceous, dark green to black, shining, finely nerved, 2-ribbed, smooth, the beaks short, cylindrical, 0.2-0.3 mm long, translucent at the tips; female scales egg-shaped and pointed to rounded at the tips, shorter than the perigynia, whitish to yellowish-green or pale brown, with greenish midribs and translucent margins; stigmas 3; achenes 3-angled, with thicker angles and concave sides, sharp-pointed, smooth, 1.2-1.4 mm long.

Carex echinata Murr. (*C. angustior* Mack., *C. cephalantha* [Bailey] Bickn., *C. muricata* auct. non L., *C. stellulata* Good. = *ssp. echinata*; *C. phyllomanica* W. Boott = *ssp. phyllomanica*)
star sedge (*ssp. echinata*), coastal stellate sedge (*ssp. phyllomanica*)

HABITAT/RANGE:

Bogs and wet sedge meadows, open forests or sandy lakeshores and streamsides in the lowland and montane zones; *ssp. echinata* - frequent in S coastal BC, rare E of the Coast-Cascade Mountains N to 54° N; *ssp. phyllomanica* - common in coastal BC; *ssp. echinata* - circumpolar, N to AK (Aleutian Islands), E to NF and S to MA, PA, SC, IN, IA, ND, CO, UT, NV and CA; Eurasia; *ssp. phyllomanica* - N to AK and S to CA.

DESCRIPTION:

General: Perennial, densely tufted herb from fibrous roots; stems 10-60 cm tall, about equalling the leaves, roughened above.

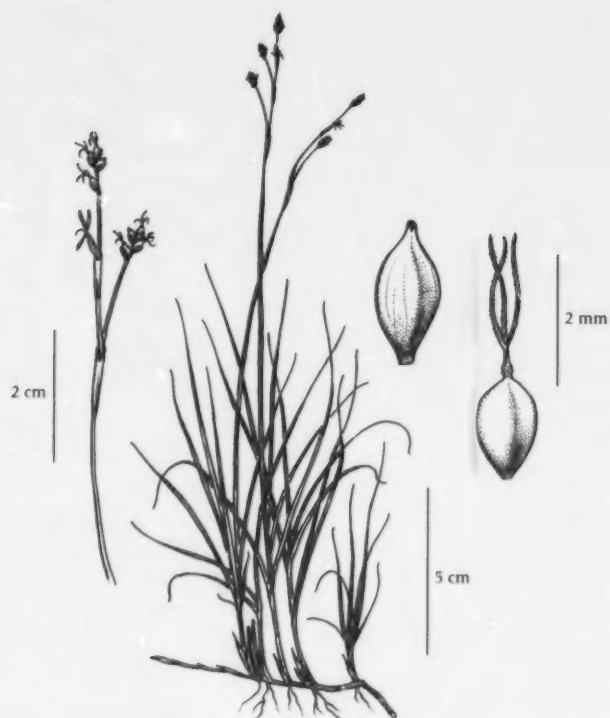
Leaves: Sheaths tight, more or less red-dotted on the fronts; blades 2 to 4 per stem, flat or channelled, smooth, borne on the lower 1/2 of the stems, 0.7-3 mm wide, the lower ones reduced.

Flowers: Spikes 2 to 7, the terminal one unstalked, 4-10 mm long, with both male and female flowers, the female flowers towards the tips, the lower spikes 1 to 4, ascending, remote, 5- to 15-flowered, with female flowers, short-stalked; bracts subtending the female spikes short to prolonged and hairlike, the latter up to 2 cm long, bladeless, the upper bracts reduced and scalelike.

Fruits: Perigynia egg-shaped, 2.5-4 mm long, 1-1.4 mm wide, plano-convex, reflexed, appressed, or spreading, greenish-yellow to brownish, sharp-edged, with smooth margins, finely-nerved to nerveless, the beaks 1-1.5 mm long, inconspicuously bidentate; female scales egg-shaped and rounded or pointed to awned at the tips, shorter than the perigynia, yellowish-brown to chestnut brown, with greenish midribs, the margins and tips broad, bright white or narrow, opaque or dull whitish; stigmas 2; achenes lens-shaped, sharp-pointed, 1.4-2 mm long.

Notes: Two varieties are recognized for BC:

1. Female scales rounded, chestnut brown, the margins and tips broad, bright white *ssp. phyllomanica* (W. Boott) Reznicek
1. Female scales pointed to awned, yellowish-brown, the margins and tips narrow, opaque or dull whitish *ssp. echinata*

*Carex eburnea**Carex echinata* ssp. *echinata**Carex echinata* ssp. *phyllomanica*

Carex engelmannii Bailey (*C. breweri* Boott var. *paddoensis* [Suks.] Cronq.)**Engelmann's sedge****HABITAT/RANGE:**

Moist to dry meadows and talus slopes in the upper subalpine and alpine zones; locally frequent in SC BC; S to CO, UT, NV and CA.

DESCRIPTION:

General: Perennial, tufted herb from creeping rhizomes; stems 5-20 cm tall, equalling to slightly longer than the leaves.

Leaves: Sheaths with longitudinal lines on the outer sides, blunt at the mouths, with short ligules; blades 5 to 9 per stem, in-rolled, thread-like, borne on the lower 1/4 of the stems, 0.3-0.5 mm wide, the lower ones lacking or reduced to scales.

Flowers: Spikes solitary, with both female and male flowers, the few male flowers towards the tips, the spikes broadly egg-shaped, 10-15 mm long, 6-10 mm wide, erect; bractless.

Fruits: Perigynia egg-shaped, 4.5-5 mm long, 1.8-2.3 mm wide, straw-coloured or brown, inflated, smooth, shiny, membranaceous, nerveless, short-stalked, the beaks short, bidentate; female scales egg-shaped, usually slightly shorter than the perigynia, sharp-pointed or awned, reddish-brown, brown or straw-coloured, the centres lighter, the margins translucent; stigmas 3; achenes 3-angled, 1.2-1.5 mm long.

Notes: Further study may indicate that this species is better treated as a variety of *C. breweri*.

Carex epapillosa Mack. (*C. atrata* L. var. *erecta* Boott, *C. heteroneura* W. Boott var. *epapillosa* [Mack.] F.J. Herm.)**blackened sedge****HABITAT/RANGE:**

Moist to dry meadows in the upper subalpine to alpine zones; rare in SC BC; E to SW AB and S to CO, AZ and CA.

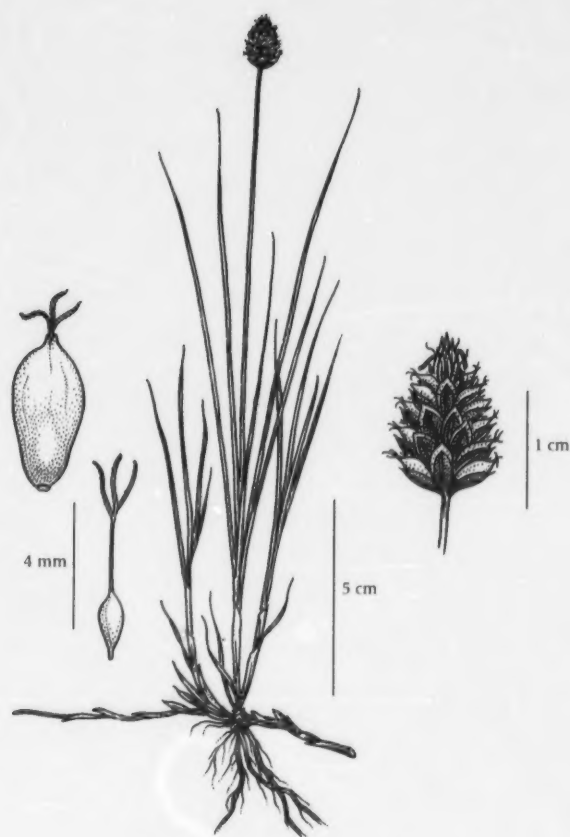
DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems 15-60 cm tall, exceeding the leaves.

Leaves: Sheaths purplish-red towards the bases; blades flat, 2-6 mm wide, the lower ones fully developed.

Flowers: Spikes usually 2 to 5, the terminal spikes with both female and male flowers, the female ones towards the tips, the lower spikes 1 to 4, with female flowers, 0.6-2.5 cm long, erect, short-stalked, usually the lowermost spikes remote and long stalked; bracts subtending the spikes short-sheathing, leaflike, about equalling the spikes.

Fruits: Perigynia broadly egg-shaped to nearly globe-shaped, 3.5-4 mm long, 1.8-2 mm wide, flattened, dull yellowish-green with purplish spots, 2-ribbed, the beaks short bidentate, less than 0.5 mm long; female scales lanceolate, nearly as long as and narrower than the perigynia, reddish-black, with light brown margins, with pointed tips; stigmas 3; achenes 3-angled, 1.5-1.7 mm long.

*Carex engelmannii**Carex epapillosa*

Carex exsiccata Bailey (*C. vesicaria* auct. non L., *C. vesicaria* L. var. *major* Boott)**inflated sedge****HABITAT/RANGE:**

Fens, swamps, marshes, shorelines and wet meadows in the lowland and montane zones; common in SW BC, less frequent northward; N to AK and NT, disjunct E to SK and S to CO, UT, NV and CA.

DESCRIPTION:

General: Perennial, tufted herb from short-creeping rhizomes; stems 30-100 cm tall, triangular, rough below the inflorescence, longer than the leaves.

Leaves: Sheaths tight, ligules longer than wide; blades 4 to 8 per stem, flat, cross-walled, the margins rolled-under, borne on the lower 1/2 of the stem, 2-6 mm wide, the lower ones reduced, persistent.

Flowers: Spikes 4 to 7, the terminal 2 or 3 linear, 1.5-5 cm long, long-stalked, with male flowers, the lower spikes 2 to 4, cylindrical, 2.5-7.5 cm long, with female flowers, or some with male flowers above the female flowers, short-stalked, erect to spreading, well spaced along the upper 1/2 of the stem; bracts subtending the lowest spike leaflike, sheathless, the lowest ones longer than the inflorescence.

Fruits: Perigynia lanceolate, 7-10 mm long, 1.5-3 mm wide, yellowish-green to reddish-brown, somewhat inflated, smooth, shiny, strongly nerved, gradually tapered from the broad bases to long beaks, the beaks 1.5-3 mm long, bidentate, with straight teeth; female scales lanceolate to egg-shaped, pointed, narrower and shorter than the perigynia, yellowish- to reddish-brown, with 3-nerved, lighter centres and narrow, translucent margins; stigmas 3; achenes 3-angled, 1.7-2.4 mm long.

Notes: Closely related to *C. vesicaria*.

Carex feta Bailey (*C. straminea* Willd. ex Schkuhr var. *mixta* Bailey)**green-sheathed sedge****HABITAT/RANGE:**

Ditches, marshes and wet meadows in the lowland and montane zones; rare in SW BC, S to CA.

DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems 40-120 cm tall, exceeding the leaves.

Leaves: Sheaths tight, green and strongly veined; blades flat, 2.5-4.5 mm wide, borne on the lower 1/3 of the stem.

Flowers: Spikes 5 to 15, the lower ones reduced, aggregated into an ellipsoid, 2-8 cm long head, unstalked, with both female and male flowers, the female ones towards the tips; bracts subtending the spikes sheathless, reduced, inconspicuous, except the lowermost sometimes awnlike and 0.5-1 cm long.

Fruits: Perigynia egg-shaped, 3-3.5 mm long, 1.75-2 mm wide, yellowish-green to brownish, more or less flattened, the margins winged nearly to the bases, the upper 1/2 fringed with teeth, several-nerved on the backs, almost nerveless below, the beaks obliquely cleft, less than 1 mm long, narrowly margined and toothed below; female scales narrowly elliptical, yellowish-green, with translucent margins, somewhat shorter and narrower than the perigynia; stigmas 2; achenes lens-shaped, 1.1 mm long.

Carex filifolia Nutt.**thread-leaved sedge****HABITAT/RANGE:**

Dry open sites in the steppe and montane zones; frequent in SC BC, less frequent eastward and northward; N to AK, YT and NT, E to SW MB and S to MN, KA, NM, AZ and CA.

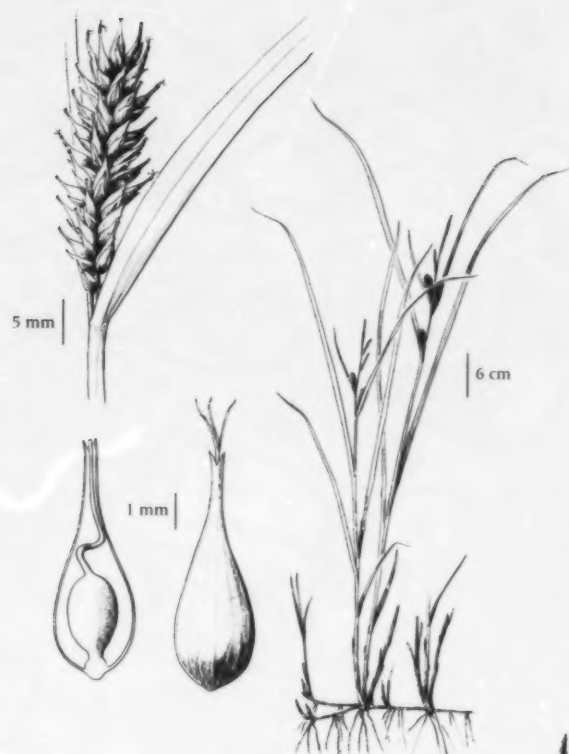
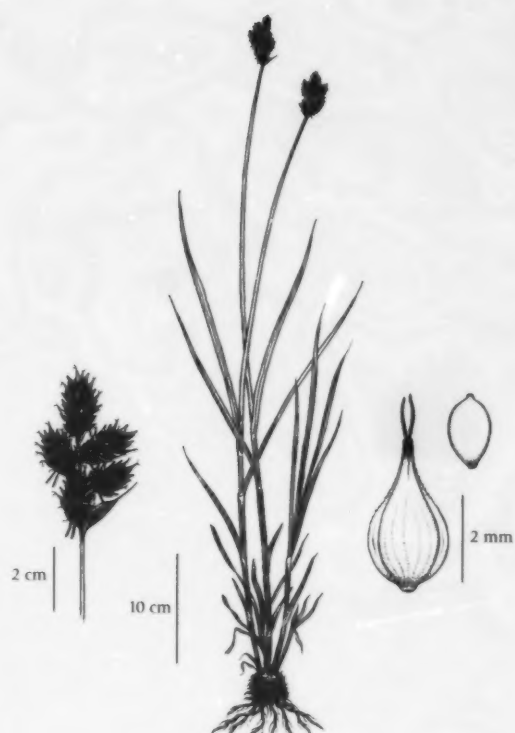
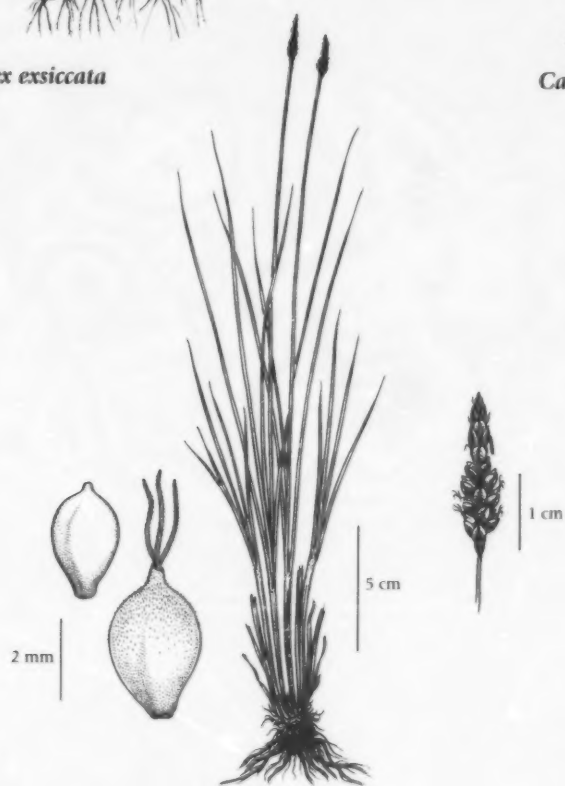
DESCRIPTION:

General: Perennial, densely tufted herb from stout, fibrous roots; stems 8-30 cm tall, longer than the leaves.

Leaves: Sheaths tight, the old basal ones persistent and conspicuous, lined, breaking into threads; blades 2 or 3 per stem, in-rolled, borne near the base, about 0.25 mm wide, the lower ones persistent.

Flowers: Spikes solitary, linear at first, expanding below at maturity, with both female and male flowers, the male flowers towards the tips, the female flowers below, 10-30 mm long, 3-6 mm wide, erect; bractless.

Fruits: Perigynia egg-shaped, 3-4 mm long, 2-2.3 mm wide, dull whitish to straw-coloured, short hairy, at least above, obscurely 2-ribbed, unstalked, the beaks translucent, 0.2-0.4 mm long; female scales broadly egg-shaped, larger than and concealing the perigynia, rounded, greenish, the centres darker, the margins bright white-translucent; stigmas 3; achenes 3-angled, 2.2-3 mm long.

*Carex exsiccata**Carex feta**Carex filifolia*

Carex flava L.

yellow sedge; large yellow sedge

HABITAT/RANGE:

Bogs, swamps, shorelines and wet, sandy sites in the lowland and montane zones; frequent in S BC, rare northward, absent on the Queen Charlotte Islands; disjunct circumpolar, N to AK and YT, E to NF and S to NH, NJ, PA, VA, OH, IN, WI, MN, CO, ID and WA; Iceland, Europe.

DESCRIPTION:

General: Perennial, densely tufted herb from fibrous roots; stems 10-80 cm tall, longer than the leaves.

Leaves: Sheaths straw-coloured to greenish; blades 4 to 8 per stem, flat or channelled below, borne on the lower 1/2 of the stem, 2-5 mm wide, the lower ones reduced or lacking.

Flowers: Spikes 3 to 7, the terminal one unstalked or short-stalked, linear, 5-20 mm long, with male flowers (rarely some female flowers), the lower spikes 2 to 5, erect, cylindrical, 5-19 mm long, many-flowered, with female flowers (sometimes with male flowers at the tips), long-stalked, the stalks 5-20 mm long; bracts subtending the female spikes conspicuous, leaflike, 3-8 cm long, much exceeding the inflorescence, the sheaths 2-20 mm long; the upper bracts shorter.

Fruits: Perigynia spreading to reflexed, egg-shaped, 4.2-6.5 mm long, 1.2-2 mm wide, yellowish-green to green, smooth, prominently nerved, 2-ribbed, the beaks about as long as the bodies of the perigynia, bidentate, finely toothed on the margins, reddish-tinged at the tips; female scales egg-shaped, pointed, shortly awned at the tips, narrower and much shorter than the perigynia, reddish to brownish, with greenish midribs and translucent margins; stigmas 3; achenes 3-angled, smooth, 1.2-1.5 mm long.

Carex garberi Fern. (*C. hassei* auct. non Bailey = ssp. *bifaria*)

Garber's sedge

HABITAT/RANGE:

Wet meadows, shorelines and seepage sites in the lowland, steppe and montane zones; infrequent on Vancouver Island (ssp. *bifaria*), frequent E of the Coast-Cascade Mountains (ssp. *garberi*); N to AK, YT, and NT, E to PQ, NB and NS, and S to ME, NH, PA, OH, IN, IL, MN, ND, MT and CA.

DESCRIPTION:

General: Perennial, loosely tufted herb from long rhizomes; stems 5-60 cm tall, longer than the leaves.

Leaves: Sheaths tight; blades 3 to 6 per stem, flat, borne on the lower 1/3 of the stem, 2-4 mm wide, the lower ones reduced.

Flowers: Spikes 3 to 5, 4-10 mm long, the terminal spike entirely with male flowers or with a few female flowers at the top, the lateral spikes 2 to 4, with female flowers, short-stalked; bracts subtending the female spikes short-sheathing, leaflike, the lowermost equalling or slightly surpassing the inflorescence.

Fruits: Perigynia globe-shaped, 2-3 mm wide, inflated, bluish-grey-green, obscurely nerved, with a powdery surface, beakless; female scales egg-shaped and pointed to rounded at the tips, slightly shorter and narrower than the perigynia, reddish-brown, with greenish midribs and translucent margins; stigmas 2; achenes lens-shaped, 1.2-1.5 mm long.

Notes: Two subspecies (sometimes treated as separate species) can be distinguished:

1. Terminal spike usually with female flowers above the male flowers with at least 1/4 of the flowers female and the male portion 1.2-2.7 mm wide; lateral spikes on average with less than 20 flowers ssp. *garberi*
1. Terminal spike male, rarely with a few female flowers at the tip, 1.8-3 mm wide; lateral spikes on average with 20 or more flowers ssp. *bifaria* (Fern.) Hult.

*Carex flava**Carex garberi* ssp. *garberi*

Carex geyeri Boott

elk sedge; Geyer's sedge

HABITAT/RANGE:

Dry meadows and open forests in the montane to alpine zones; rare in SE BC; E to SW AB and S to CO, UT, NV and CA.

DESCRIPTION:

General: Perennial, loosely tufted herb from branching rhizomes; stems 10-50 cm tall, equalling or shorter than the leaves.

Leaves: Sheaths tight, blunt at the mouths, with short ligules; blades usually 2 per stem, flat, borne on the lower 1/3 of the stem, 1.5-3 mm wide, the margins rough.

Flowers: Spikes solitary, with both female and male flowers, the male part linear with a few male flowers towards the tips, short-stalked above the 1 to 3, more or less remote, spreading female flowers, 15-25 mm long, 7-12 mm wide; bractless.

Fruits: Perigynia egg-shaped, tapering to spongy bases, 5-7 mm long, 2.5-3.5 mm wide, greenish or brownish, smooth, 2-ribbed, abruptly short-stalked, the beaks short, scarcely bidentate; female scales lanceolate, longer and slightly wider than the perigynia, sharp-pointed or short-awned, greenish to brownish, the centres lighter, the margins broad, translucent; stigmas 3; achenes 3-angled, 3.5-4.5 mm long.

Carex glacialis Mack.

glacier sedge

HABITAT/RANGE:

Dry open slopes and gravelly sites from the montane to alpine zones; infrequent in N BC, rare southward to 52° N; circumpolar, N to AK, YT and NT and E to NF; Greenland, Iceland, N Eurasia.

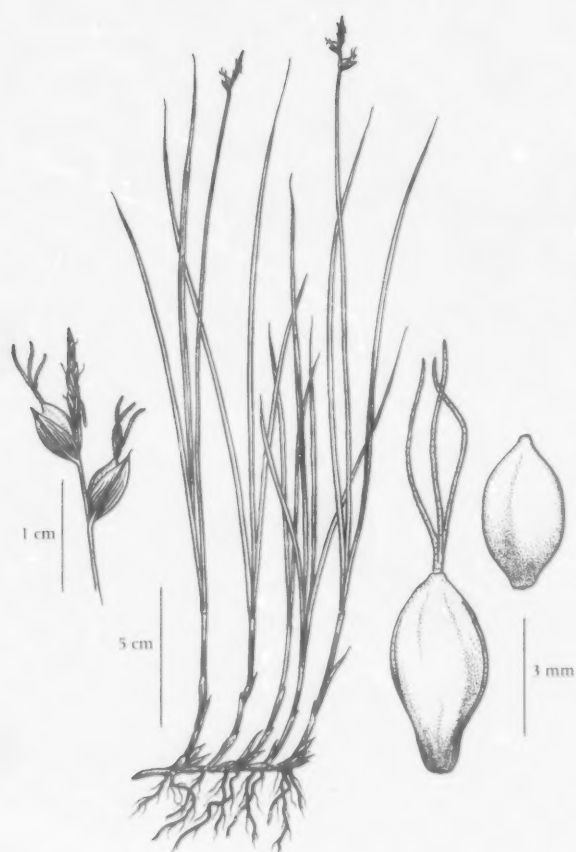
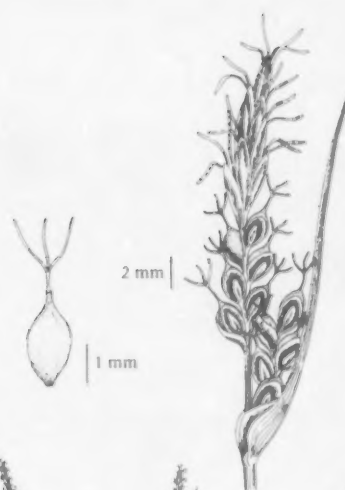
DESCRIPTION:

General: Perennial, densely tufted herb from short fibrous roots; stems 5-15 cm tall, longer than the leaves.

Leaves: Sheaths straw-coloured to purplish-brown; blades 3 to 8 per stem, flat, channelled above, borne on the lower 1/2 of the stem, 0.7-1 mm wide, the lower ones reduced.

Flowers: Spikes 2 to 4, the terminal one unstalked, linear, 2-6 mm long, with male flowers, the lower spikes 1 to 3, not much separated, cylindrical, 2-5 mm long, with female flowers, unstalked or short-stalked, the stalks 1-2 mm long; bracts subtending the female spikes inconspicuous, scalelike, round-tipped or prolonged into awns up to 15 mm long, shorter than the inflorescence, the sheaths short, tubular, the upper bracts shorter.

Fruits: Perigynia egg-shaped to lanceolate, 2-2.5 mm long, 0.8-1 mm wide, yellowish-green to straw-coloured, ascending to spreading, smooth, cylindrical, the beaks short, 0.3-0.5 mm long, translucent; female scales egg-shaped to elliptical, round-tipped to pointed, about as long as the perigynia, brownish, with greenish to straw-coloured midribs and translucent margins; stigmas 3; achenes 3-angled, pointed, 1.5-2 mm long.

*Carex geyeri**Carex glacialis*

Carex glareosa* Wahlenb. var. *amphigena* Fern. (*C. marina* auct. non Dewey)*lesser saltmarsh sedge****HABITAT/RANGE:**

Saline marshes in the lowland zone; rare in coastal areas N of Vancouver Island; circumpolar, N to AK, YT and NT, disjunct to PQ and NF; Eurasia.

DESCRIPTION:

General: Perennial, somewhat tufted herb from compact rhizomes; stems bluish-green, 15-40 cm tall, longer than the leaves.

Leaves: Sheaths tight; blades numerous, borne on the lower part of the stems, bluish-green, 1.5-3 mm wide, flat or channeled.

Flowers: Spikes 5 to 9 in a 1- to 3-cm long, dense head, occasionally with a few spikes separate below, the top spike larger than the lower ones, egg-shaped, many-flowered, 2-4 mm long, ascending, with both female and male flowers, the female flowers towards the tips, the male flowers inconspicuous, the lower spikes mostly female; lowermost bract awnlike, about 0.5-1 cm long or lacking.

Fruits: Perigynia egg-shaped, 2-2.5 mm long, 0.8-1 mm wide, bluish-green, dark-green or brownish, minutely whitish-dotted, biconvex, smooth, obscurely nerved, especially above, unstalked, the beaks 0.25 mm long, smooth, not cleft; female scales egg-shaped, covering about 1/2 of the perigynia, pointed, green, with green midribs; stigmas 2; achenes lens-shaped, 1-1.7 mm long, filling the perigynia.

Carex gmelinii* Hook. & Arn.*Gmelin's sedge****HABITAT/RANGE:**

Saline marshes, exposed bluffs and meadows in the lowland zone; rare in coastal BC; amphiberian, N to AK and YT; E Asia.

DESCRIPTION:

General: Perennial, tufted herb from a short stout rhizome; stems 30-50 cm tall, exceeding the leaves.

Leaves: Sheaths purplish-red towards the bases; blades flat with rolled-under margins, 2-4 mm wide, the lower ones reduced.

Flowers: Spikes 3 to 6, the terminal spikes with both female and male flowers, the female ones towards the tips, the lower spikes 2 to 5, with female flowers, short-stalked, 0.6-2.5 cm long, erect, the lowermost spikes remote and long-stalked; bracts subtending the spikes short-sheathing, leaflike, about equalling the inflorescence.

Fruits: Perigynia egg-shaped, 4-5 mm long, 1.8-2 mm wide, green to dark brown, nerved, the beaks short, less than 0.3 mm long; female scales broadly egg-shaped, as long as and wider than the perigynia, pointed and abruptly awned at the tips, reddish-black, roughly pimpled; stigmas 3; achenes 3-angled, granular, 1.7-2 mm long.

Carex gynocrates* Wormsk. ex Drej. (*C. dioica* L. ssp. *gynocrates* [Wormsk. ex Drej.] Hult.)*yellow bog sedge****HABITAT/RANGE:**

Bogs, swamps, fens and wet meadows in the upper montane to alpine zones; common in BC in and E of the Coast-Cascade Mountains; amphiberian, N to AK, YT and NT, E to NF and S to MA, PA, MN, MI, ND, CO, UT, NV and OR; Greenland, E Asia.

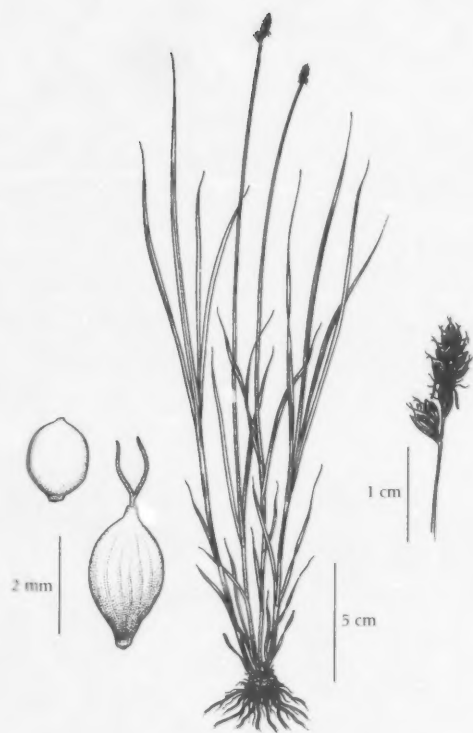
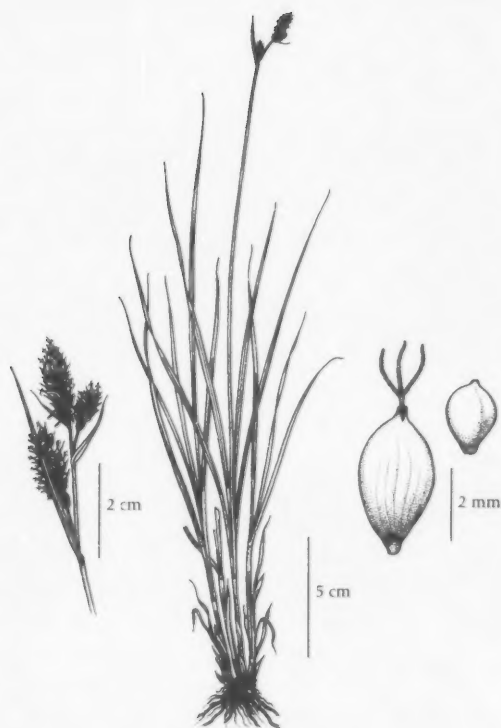
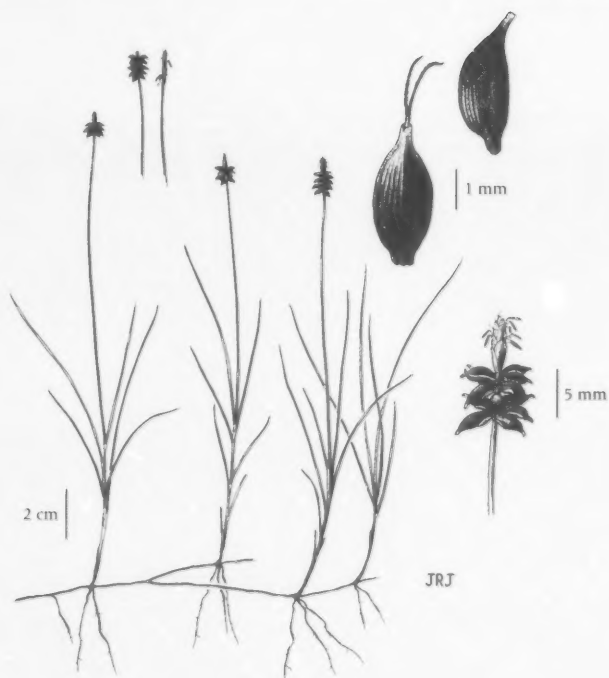
DESCRIPTION:

General: Perennial herb from long, slender rhizomes; stems 5-30 cm tall, single or a few together, longer than the leaves.

Leaves: Sheaths tight; ligules wider than long; blades 3 to 5 per stem, narrowly in-rolled, borne on the lower 1/2 of the stem, about 0.5 mm wide, the lower ones persisting, reduced.

Flowers: Spikes solitary, usually with both female and male flowers, the few male flowers towards the tips, sometimes the spikes with all male flowers or all female flowers, the male segment broadly cylindrical, the female segment egg-shaped, 5-15 mm long, 2-4 mm wide, erect; bractless.

Fruits: Perigynia egg-shaped, 2.5-4 mm long, 1.5-2 mm wide, yellowish to brownish-black, inflated, shiny, finely and many nerved above, reflexed when ripe, short-stalked, the beaks faintly toothed, about 0.5 mm long, bidentate; female scales egg-shaped, shorter but wider than the perigynia, pointed, reddish-brown to brown, the centres lighter; stigmas 2; achenes lens-shaped, 1.2-1.5 mm long.

*Carex glareosa* var. *amphigena**Carex gmelinii**Carex gynocrates*

Carex haydeniana Olney (*C. macloviana* d'Urv. ssp. *haydeniana* [Olney] Taylor & MacBryde)**Hayden's sedge****HABITAT/RANGE:**

Moist to mesic meadows, rocky slopes and moraines in the subalpine and alpine zones; infrequent in SC and SE BC; E to SW AB and S to CO, AZ and CA.

DESCRIPTION:

General: Perennial, tufted herb from short, fibrous roots; stems 10-40 cm tall, exceeding the leaves.

Leaves: Sheaths tight; blades flat, 2-3.5 mm wide, borne on the lower 1/3 of the stem, lowermost stem leaves reduced to scales.

Flowers: Spikes 3 to 6 aggregated into a dense, 1- to 2-cm long, triangular to egg-shaped head, unstalked, with both female and male flowers, the female ones towards the tips; bracts subtending the spikes sheathless, reduced, inconspicuous.

Fruits: Perigynia egg-shaped, 4.5-6 mm long, 1.5-2.5 mm wide, brownish to dark brown, more or less flattened, the margins winged nearly to the bases and the upper 1/2 fringed with teeth, lightly several-nerved on the back, with faint nerves or nerveless below, the beak obscurely bidentate, about 1.5 mm long, narrowly margined and toothed below; female scales elliptical, dark brown, somewhat shorter and narrower than the perigynia; stigmas 2; achenes lens-shaped, 1.4-1.8 mm long.

Carex heleonastes L.f. (*C. praeceptorium* Mack.)**Hudson Bay sedge****HABITAT/RANGE:**

Bogs and fens in the montane zone; rare in BC east of the Coast-Cascade Mountains; circumpolar, N to AK, YT and NT, E to NF and S to MI; Eurasia.

DESCRIPTION:

General: Perennial, somewhat tufted herb from short rhizomes; stems 25-40 cm tall, bluntly triangular and rough below the inflorescence, longer than the leaves.

Leaves: Sheaths tight; blades numerous, borne on the lower part of the stem, bluish-green, 1.5-2.5 mm wide, flat.

Flowers: Spikes 4 to 6 in a 1-3 cm long, dense head, occasionally with a few spikes separate below, egg-shaped, many-flowered, 3-7 mm long, ascending, with both female and male flowers, the female flowers towards the tips, the male flowers inconspicuous; lowermost bract awnlike, about 0.5-2 cm long.

Fruits: Perigynia egg-shaped, 2.5-3 mm long, 0.8-1 mm wide, green, dark green or brownish, minutely whitish-dotted, plano-convex, smooth, nerved, especially above, unstalked, the beaks about 0.5 mm long, bidentate; female scales egg-shaped, covering most of the perigynia, pointed, yellow-brown to reddish-brown, with green midribs; stigmas 2; achenes lens-shaped, 1.4-1.7 mm long, filling the perigynia.

Carex hendersonii Bailey**Henderson's sedge****HABITAT/RANGE:**

Moist forests in the lowland zone; locally frequent on SE Vancouver Island, the Gulf Islands and the adjacent mainland; S to CA.

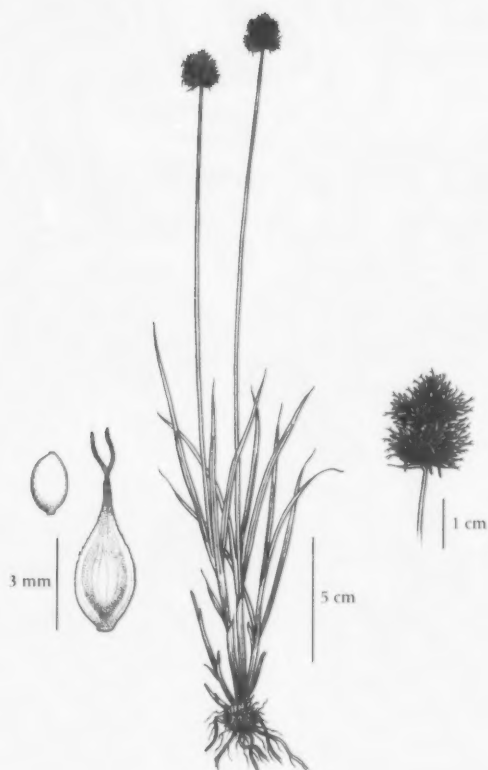
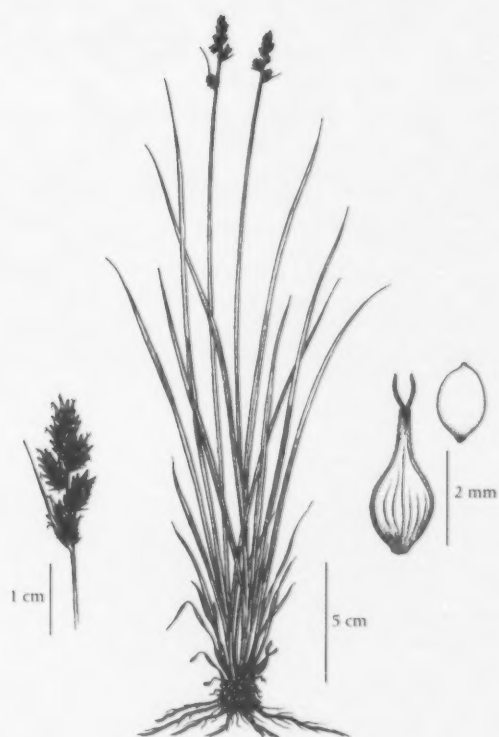
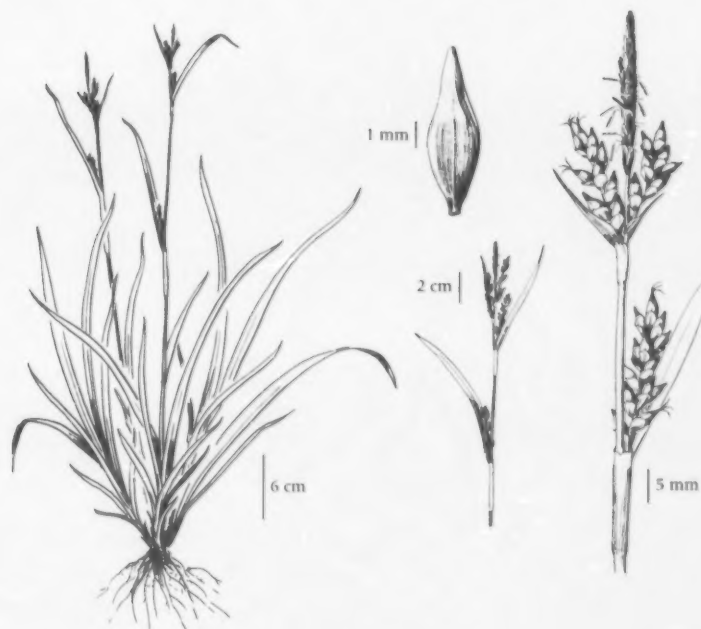
DESCRIPTION:

General: Perennial, tufted herb from short, fibrous roots; stems 50-110 cm tall, longer than the leaves.

Leaves: Sheaths loose, 2-lobed at the tips; ligules 0.8-2.5 cm long; blades 3 to 5 per stem, channeled, borne on the lower 1/2 of stem, 6-15 mm wide, the lower ones reduced.

Flowers: Spikes 3 to 5, remote, 1-4 cm long, borne on upper 1/2 of the stem, long-stalked, erect to spreading, the terminal one linear, 1.5-3 cm long, with male flowers, the lower 2 to 4 spikes narrowly cylindrical, 1-4 cm long, with female flowers; bracts subtending the female spikes long-sheathing, leaflike, up to 15 cm long, longer than the spikes.

Fruits: Perigynia broadly lanceolate to narrowly egg-shaped, 4-6.5 mm long, 1.2-2 mm wide, few, green, slightly inflated, smooth, shiny, many-nerved, prominently keeled, spreading or ascending, short-stalked, tapered to both ends, the beaks poorly defined; female scales broadly egg-shaped, much shorter than the perigynia, reddish-brown, the centres 3-nerved, pale green, the margins white-translucent, the tips round to pointed; stigmas 3; achenes 3-angled, 2.7-3.2 mm long.

*Carex haydeniana**Carex heleonastes**Carex hendersonii*

Carex hoodii Boott

Hood's sedge

HABITAT/RANGE:

Moist to dry meadows and forest openings in all vegetation zones; common in BC south of 56° N except absent from the Queen Charlotte Islands, N Vancouver Island, and the adjacent mainland; E to SW SK and S to SD, CO, UT, NV and CA.

DESCRIPTION:

General: Perennial, densely tufted herb from fibrous roots; stems 30-80 cm tall, densely clustered, roughened on the angles above, longer than the leaves.

Leaves: Sheaths tight; blades 2 or 3 per stem, borne on the lower 1/4 of the stem, flat or channeled below, 1.5-3.5 mm wide.

Flowers: Spikes 4 to 8, densely aggregated into an egg- or globe-shaped, 1- to 2-cm long head, the spikes not distinguishable below, unstalked, with both female and male flowers, the inconspicuous male flowers towards the tips; bracts lacking or a rudimentary.

Fruits: Perigynia egg-shaped, 3.4-5 mm long, 1.5-2.5 mm wide, convex and nerved above, concave and nerveless below, green, smooth, very short-stalked, finely toothed on the upper 1/2, the beaks 1/3 the length of the bodies, bidentate; female scales egg-shaped, equalling or slightly shorter than the perigynia, pointed, brown, the midribs greenish, the margins translucent; stigmas 2; achenes lens-shaped, smooth, 1.8-2 mm long.

Carex hystricina Schkuhr ex Willd.

porcupine sedge

HABITAT/RANGE:

Swamps, shorelines, streambanks and wet meadows in the steppe and montane zones; rare in BC east of the Coast-Cascade Mountains and S of 56° N; E to NF and S to VA, TN, TX, NM, AZ and CA.

DESCRIPTION:

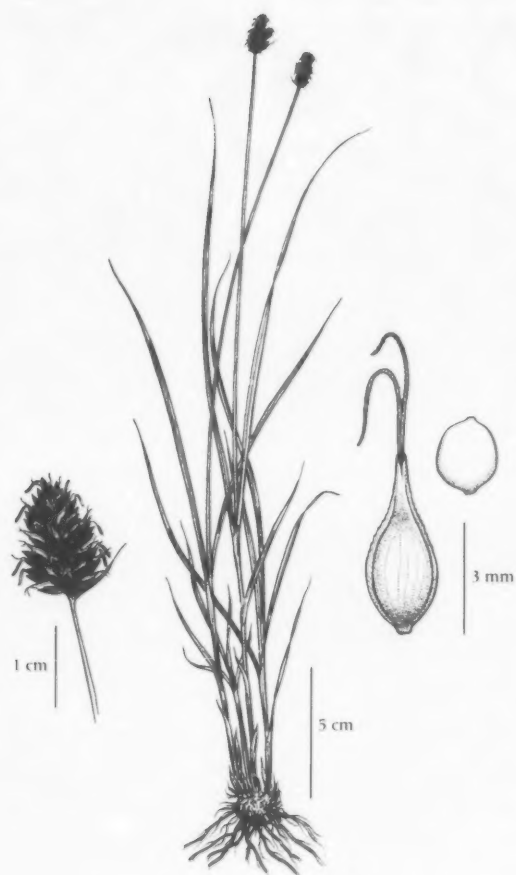
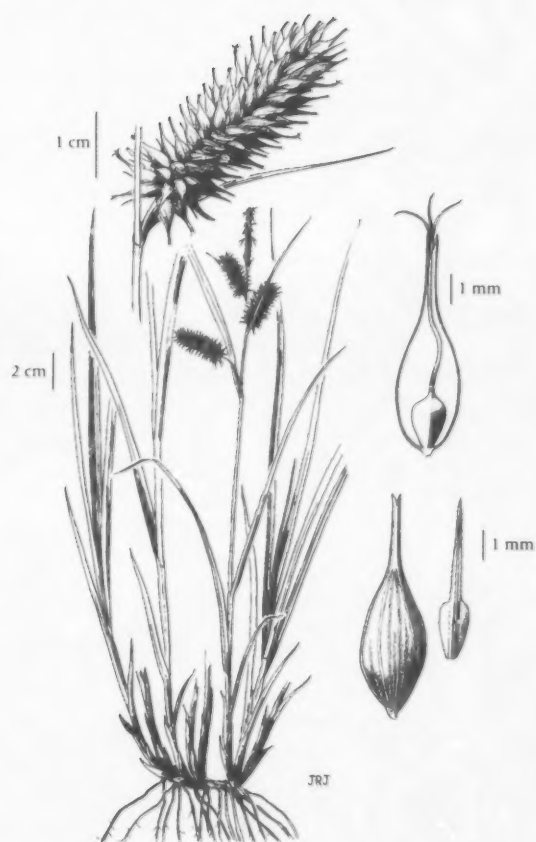
General: Perennial, tufted herb from short, stout rhizomes; stems 15-100 cm tall, as long as or longer than the leaves.

Leaves: Sheaths reddish, the lower ones breaking into threads; blades 3 to 7 per stem, flat, with crosswalls, the margins slightly rolled-under, 2-10 mm wide.

Flowers: Spikes 2 to 5, the terminal one linear, 2-4 cm long, with male flowers, the lower spikes 1 to 4, cylindrical, with female flowers, the lower long-stalked, reflexed, the upper short-stalked, erect; bracts subtending the female spikes tubular-sheathing, leaflike, the lower bracts much longer than the spikes and their stalks, the upper ones progressively reduced.

Fruits: Perigynia lanceolate to narrowly egg-shaped, 5-7 mm long, 1.5-2 mm wide, usually pale greenish, shiny, inflated, convex, smooth above, (12-) 15- to 20-nerved, numerous, separate or crowded, spreading or directed downward, short-stalked, the beaks about 1/2 as long as the bodies, bidentate; the teeth 0.3-0.9 mm long, straight; female scales lanceolate, translucent, much shorter than the perigynia, the midribs extending into rough, tapered awns, the awns 2-6 mm long; stigmas 3; achenes 3-angled, 1.2-1.6 mm long.

Notes: The original spelling of the name of this sedge was *Carex hystericina*, the name suggested by C. Schkuhr. L. H. Bailey considered it a grammatical error and corrected it to *C. hystricina*. This change was accepted by the majority of *Carex* specialists (Kükenthal, Mackenzie, Fernald, Boivin, Egorova) and it is followed in our treatment as well. H. Muhlenberg's original name for this species was *Carex erinacea*. It was Schkuhr who found it necessary to use a different name (*Carex hystericina*) since *C. erinacea* had already been used for a different species. Hence the author of the name is C. Schkuhr and not H. Muhlenberg.

*Carex hoodii**Carex hystericina*

Carex illota Bailey**sheep sedge****HABITAT/RANGE:**

Bogs, shorelines and wet meadows in the upper montane to alpine zones; frequent in S BC; E to SW AB and S to CO, UT, NV and CA.

DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems 10-35 cm tall, exceeding the leaves.

Leaves: Sheaths tight; blades flat, 1-3 mm wide, borne on the lower 1/3 of the stem, the lowermost stem leaves reduced to scales.

Flowers: Spikes 3 to 5, aggregated into a dense 0.5- to 1.5-cm long ellipsoid head, unstalked, with both female and male flowers, the female ones towards the tips; bracts subtending the spikes sheathless, reduced, inconspicuous.

Fruits: Perigynia narrowly egg-shaped, 2.5-3.5 mm long, 1.3-1.5 mm wide, brownish to dark brown, more or less flattened, the margins with narrow wings, lightly several-nerved on the backs, with faint nerves or nerveless below, the beaks shallowly bidentate, about 1.5 mm long, narrowly margined, sometimes toothed; female scales elliptical, dark brown, somewhat shorter and narrower than the perigynia, margins smooth; stigmas 2; achenes lens-shaped, 1.2-1.5 mm long.

Carex incurviformis Mack. var. incurviformis (*C. maritima* auct. pro parte, non Gunn., *C. maritima* Gunn. var. *incurviformis* [Mack.] Boivin)

curved-spiked sedge**HABITAT/RANGE:**

Mesic to dry meadows and rocky slopes in the alpine zone; rare in N, SC and SE BC; N to AK, YT and NT, E to AB and S to MT and ID.

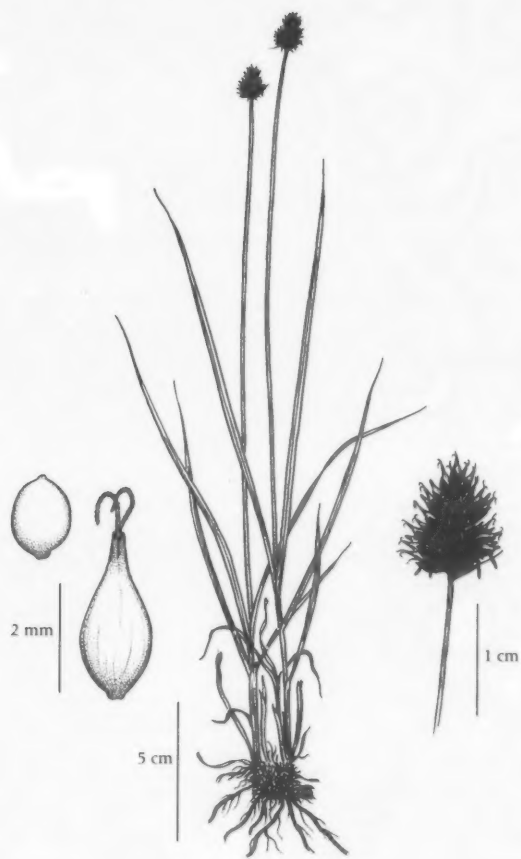
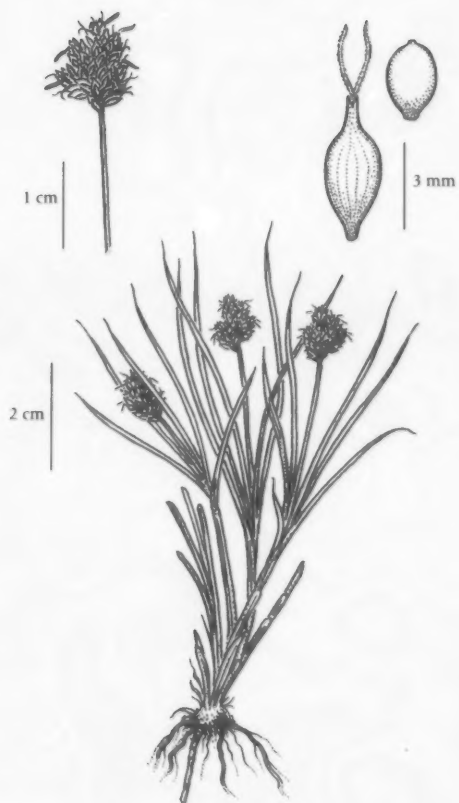
DESCRIPTION:

General: Perennial, loosely tufted herb from long-creeping, scaly rhizomes; stems 2-10 cm tall, arising singly, shorter than the leaves.

Leaves: Sheaths tight, translucent, blunt at the mouths; blades 4 to 7 per stem, crowded toward the base, flat at the base, in-rolled above, 0.7-1.5 mm wide.

Flowers: Spikes 3 to 5, densely aggregated into a nearly globe-shaped or broadly egg-shaped, 6- to 9-mm long head, scarcely distinguishable, 0.5-0.8 mm long, unstalked, with both female and male flowers, the male flowers towards the tips; bractless.

Fruits: Perigynia few, egg-shaped, 3.5-4 mm long, 1.2-1.5 mm wide, plano-convex, appressed, spreading at maturity, brown, smooth, shiny, faintly nerved, short-stalked, the beaks short, about 1 mm long, bidentate; female scales broadly egg-shaped, shorter than the perigynia, pointed, the upper ones round-tipped, brown, the centres lighter, the margins translucent; stigmas 2; achenes lens-shaped, yellowish-brown, smooth, 1.2-1.5 mm long.

*Carex illota**Carex incurviformis* var. *incurviformis*

Carex inops Bailey (*C. pensylvanica* auct. non Lam., *C. pensylvanica* Lam. var. *vespertina* Bailey = ssp. *inops*, *C. pensylvanica* Lam. var. *digyna* Boeckl. = ssp. *heliophila*)

long-stoloned sedge

HABITAT/RANGE:

Mesic to dry oak woodlands, meadows and rock outcrops in the lowland, montane and steppe zones; ssp. *inops* – infrequent in SW and SC BC; ssp. *heliophila* – infrequent in NE BC; ssp. *inops* – S to CA; ssp. *heliophila* – E to ON and S to IN, MO, OK, NM and UT.

DESCRIPTION:

General: Perennial, tufted herb from slender, creeping, branched rhizomes; stems (10) 20-50 cm tall, clustered, usually longer than the leaves, reddish-brown tinged at the bases.

Leaves: Sheaths tight, breaking into threads at the bases; blades flat, channeled towards the base, 5 to 10 per stem, the margins somewhat turned in, borne on the lower 1/3 of the stem, 1-3 mm wide, the lower ones slightly reduced.

Flowers: Spikes 2 to 4, the terminal one 1-2.5 cm long, the stalks 0.8-10 mm long, with many male flowers, the lower spikes 1 to 3, with female flowers, unstalked to short-stalked, erect; bracts subtending the lowest spike leaflike, sheathless or short-sheathing, shorter than the inflorescence, the others short, inconspicuous.

Fruits: Perigynia broadly egg-shaped to nearly globe-shaped, 2.5-4.5 mm long, 2-2.3 mm wide, dull green to straw-coloured, convex, finely short-hairy, with 2 prominent marginal nerves, the bases short-stalked, the beaks 0.5-1.5 mm long, bidentate; female scales egg-shaped, rounded to tapered, slightly longer to somewhat shorter than the perigynia, straw-coloured to brownish, with lighter midribs, with translucent margins; stigmas 3; achenes 3-angled, with convex sides above, smooth, 1.8-2.5 mm long.

Notes: Two subspecies occur in BC:

1. Lower female spike elongate, short-stalked, its bract often short-sheathing; stalks of the male spike 4-10 mm long..... ssp. *inops*
1. Lower female spike short, unstalked, its bract sheathless; stalks of the male spike 0.8-5 mm long..... ssp. *heliophila* (Mack.) Crins

***Carex interior* Bailey**

inland sedge

HABITAT/RANGE:

Bogs, fens, swamps and wet meadows in the lowland, steppe and montane zones; frequent E of the Coast-Cascade Mountains, infrequent in SW BC; N to AK, YT and NT, E to NF and S to ME, PA, VA, GA, AR, KS, NM, AZ and CA.

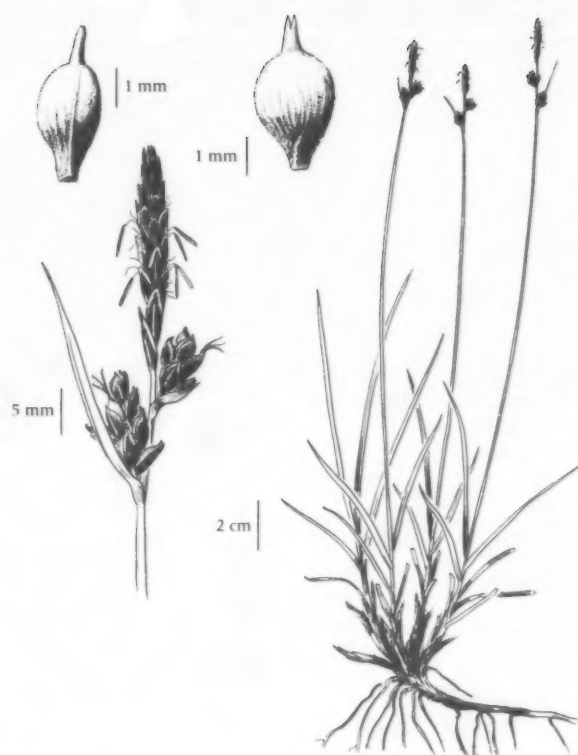
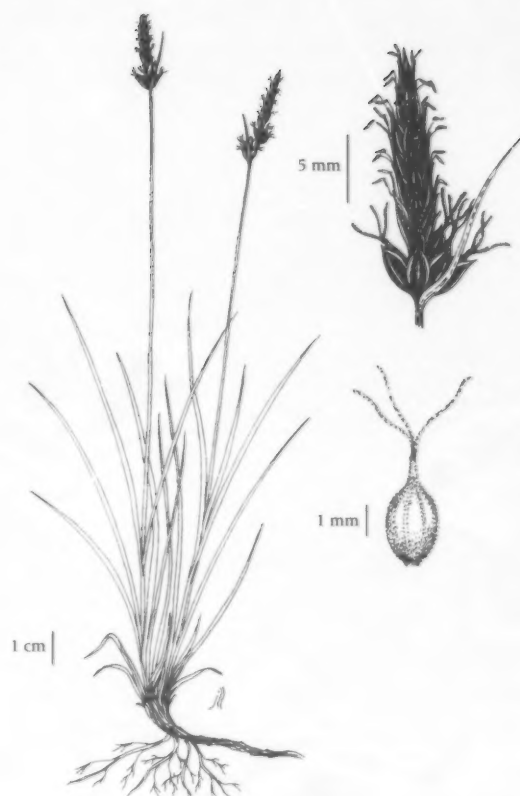
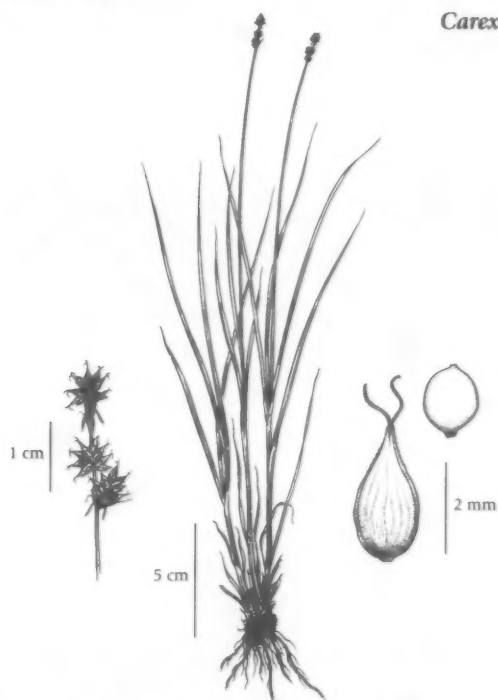
DESCRIPTION:

General: Perennial, densely tufted herb from fibrous roots; stems 15-50 cm tall, usually longer than the leaves, roughened above on the angles.

Leaves: Sheaths tight; blades about 3 per stem, flat or slightly channeled, borne on lower 1/2 of the stem, 1-3 mm wide, the lower ones reduced.

Flowers: Spikes 2 to 6, the terminal one 0.4-0.7 mm long, with both male and female flowers, the female flowers towards the tips (sometimes almost all male and linear or almost all female and cylindrical), the lower spikes 1 to 5, ascending to widely spreading, remote to crowded, (1) 5- to 10-flowered, with female flowers only, unstalked; bracts inconspicuous, scalelike.

Fruits: Perigynia egg-shaped to deltoid, 2.2-3.2 mm long, 1.5-2 mm wide, widest towards the bases, plano-convex, spreading, ascending or appressed, greenish or pale brown, finely-nerved to nerveless, sharp and thick margined, spongy below, the beaks 1/3 to 1/4 the length of the bodies, inconspicuously bidentate; female scales broadly egg-shaped, rounded at the tips, shorter than the perigynia, yellowish-brown, with greenish midribs, the margins whitish and translucent; stigmas 2; achenes lens-shaped, 1.2-1.5 mm long.

*Carex inops* ssp. *inops**Carex inops* ssp. *heliophila**Carex interior*

Carex interrupta* Boeckl.*green-fruited sedge****HABITAT/RANGE:**

Streamsides and wet places in the lowland zone; rare in SW BC; S to S OR.

DESCRIPTION:

General: Perennial, tufted herb from long, creeping rhizomes; stems triangular, with blunt, smooth edges, 20-70 cm tall, equalling the leaves.

Leaves: Sheaths tight, short; blades flat, well distributed along the stems, 2-5 mm wide, the lower ones reduced.

Flowers: Spikes 3 to 10, the terminal spike with male flowers, the lower spikes 2 to 9, with female flowers, with short stalks, 3-9 cm long, cylindrical, erect; bracts subtending the spikes leaflike, sheathless, the lower ones longer than the inflorescence, the upper ones reduced.

Fruits: Perigynia broadly elliptical, 1.5-2.1 mm long, 0.9-1.4 mm wide, brownish-green, 3-angled, the angles rounded, smooth, often ruptured by the developing achenes, the beaks short, entire; female scales egg-shaped, equalling or surpassing the perigynia, brownish-red to purplish-black, with lighter 3-nerved centres, with translucent margins; stigmas 2; achenes lens-shaped, 1.1-1.5 mm long.

Carex krausei* Boeckl. (*C. capillaris* L. ssp. *krausei* [Boeckl.] Böcher)*Krause's sedge****HABITAT/RANGE:**

Moist gravel bars, exposed banks and dry grassy slopes in the subalpine zone; rare in NW BC; disjunct circumpolar, N to AK, YT, and NT, and disjunct E to MB, ON and PQ; Greenland, Iceland, Eurasia.

DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems 20-60 cm tall, exceeding the leaves.

Leaves: Sheaths tight, brownish to straw-coloured; blades flat, 1-4 mm wide, borne on the lower 1/3 of the stems.

Flowers: Spikes 4 to 7, 4-10 mm long, erect to ascending, with both female and male flowers, the female ones towards the tips; bracts subtending the female spikes tubular-sheathing, leaflike, the lower bracts longer than the spikes and their stalks, the upper one reduced.

Fruits: Perigynia lanceolate to egg-shaped, 2-3.3 mm long, 1-1.5 mm wide, green to greenish-brown, convex, smooth or fringed above with teeth, 2-nerved marginally, short-stalked, the beaks 0.3-0.6 mm long, entire; female scales egg-shaped, rounded to pointed, brownish, with green centres, with translucent margins, shorter but often wider than the perigynia; stigmas 3; achenes lens-shaped, 1.2-1.5 mm long.

Notes: This species is closely related to *C. capillaris* and is sometimes either merged with the latter (Welsh 1974, Taylor 1983) or treated at the subspecific level (Scoggan 1978, Cody 1996).

Carex lachenalii* Schkuhr (*C. bipartita* All. [nom. rej.], *C. tripartita* auct. non All., *C. lagopina* Wahlenb.)*two-parted sedge; hare's-foot sedge****HABITAT/RANGE:**

Mesic to moist streambanks, snowbeds, rocky places and fens and bogs in the subalpine and alpine zones; infrequent throughout BC in and E of the Coast-Cascade Mountains; circumpolar, N to AK, YT and NT, E to NF and S to CO and UT; Greenland, Eurasia, New Zealand.

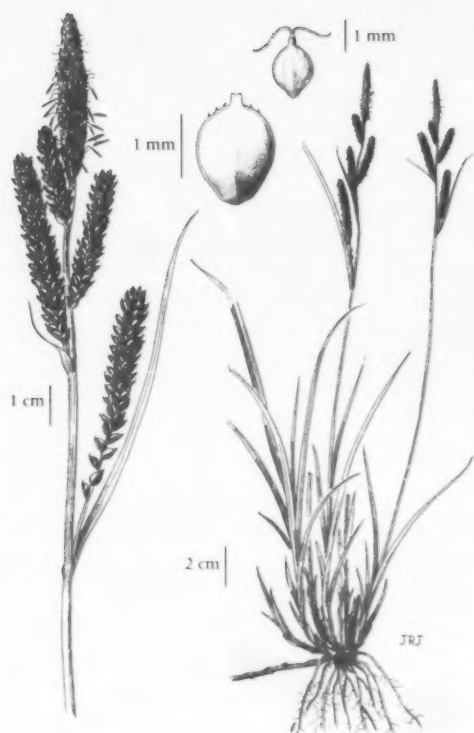
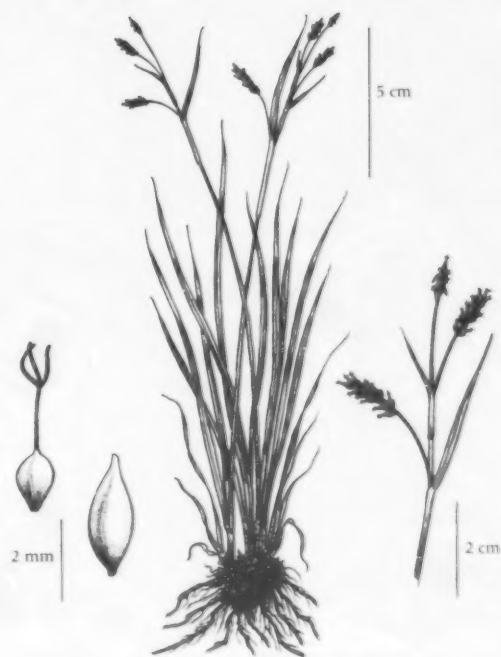
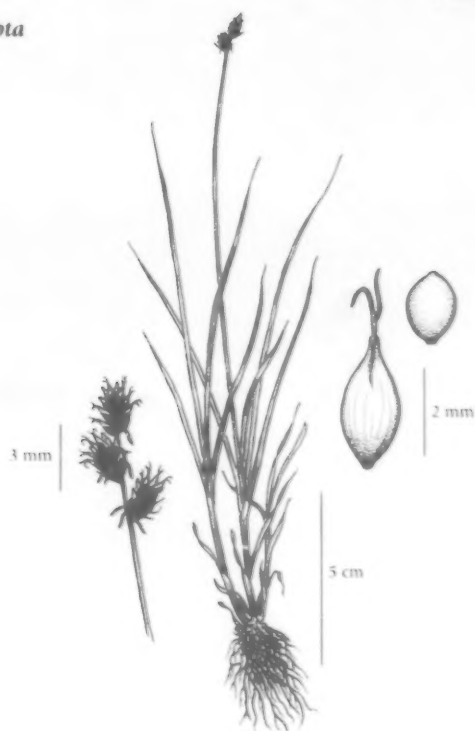
DESCRIPTION:

General: Perennial, somewhat tufted herb from elongate fibrous roots; stems dark green, 5-25 cm tall, longer than the leaves.

Leaves: Sheaths tight; blades numerous, borne on the lower part of the stem, 1.5-2 mm wide, flat.

Flowers: Spikes 3-6 in a 0.5- to 1.5-cm long, dense head, occasionally with the lowermost spike separate, egg-shaped, several-flowered, 2-3 mm long, ascending, with both female and male flowers, the female flowers towards the tips, the male flowers inconspicuous, the top spike larger than the lower ones; bracts lacking.

Fruits: Perigynia egg-shaped, 2.5-3 mm long, 0.8-1 mm wide, brownish, minutely whitish-dotted, biconvex, smooth, nerved, especially above, unstalked, the beaks 0.25 mm long, smooth, not cleft; female scales egg-shaped, covering most of the perigynia, pointed, green, with green midribs; stigmas 2; achenes lens-shaped, 1.5 mm long, filling the perigynia.

*Carex interrupta**Carex krausei**Carex lachenalii*

Carex laeviculmis Meinsh.

smooth-stemmed sedge

HABITAT/RANGE:

Bogs, shorelines, streambanks, wet meadows and moist forests in the lowland and montane zones; common in SW and SE BC south of 55° N, infrequent in SC BC, rare in N BC; amphiberian, N to AK and S to CO, ID and CA; E Asia.

DESCRIPTION:

General: Perennial, densely tufted herb from slender rhizomes; stems 30-70 cm tall, longer than the leaves, roughened above.

Leaves: Sheaths tight; blades about 3 to 5 per stem, flat, borne on the lower 1/2 of the stem, 1-2 mm wide, the lower ones reduced.

Flowers: Spikes 3 to 8, the terminal one unstalked, 4-7 mm long, with both male and female flowers, the female flowers towards the tips, the lower spikes 2 to 7, ascending to widely spreading, remote to crowded, 3- to 10-flowered, with female flowers only, unstalked; bracts of the lowest spike hairlike, up to 5 cm long, the upper ones reduced.

Fruits: Perigynia egg-shaped, 2.5-4 mm long, 1.5-1.7 mm wide, plano-convex, spreading or ascending, greenish-brown to light green, few-nerved, spongy below, the beaks 1/3 to 1/4 the length of the bodies, inconspicuously bidentate; female scales egg-shaped, rounded at the tips, sharply keeled, shorter than the perigynia, yellowish-brown, with greenish midribs; stigmas 2; achenes lens-shaped, 1.2-1.8 mm long.

Carex lanuginosa Michx. (*C. lasiocarpa* Ehrh. var. *latifolia* [Boeckl.] Gilly)

woolly sedge

HABITAT/RANGE:

Ditches, streambanks, swamps, marshes and wet meadows in the lowland, steppe and montane zones; common in S BC, absent on N Vancouver Island, the Queen Charlotte Islands and adjacent mainland; E to NF and S to TN, TX, NM and CA.

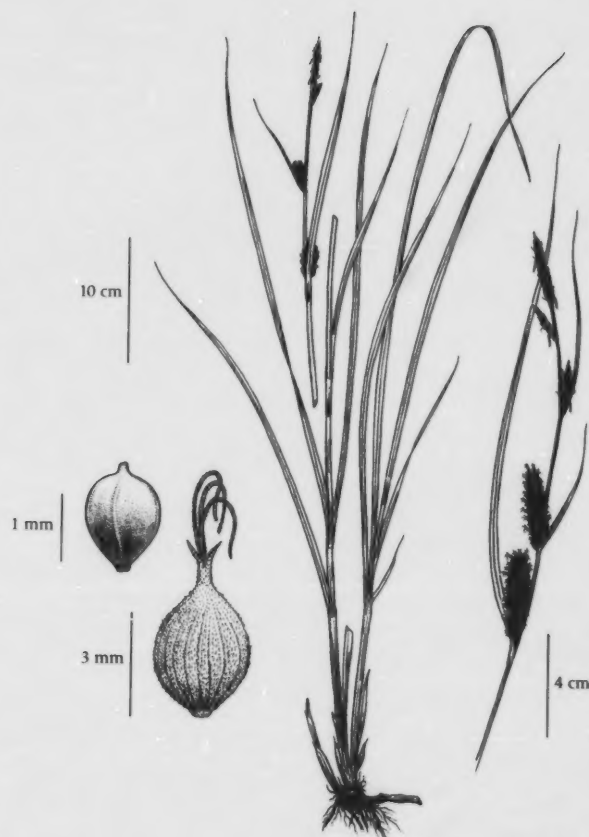
DESCRIPTION:

General: Perennial, tufted herb from long, creeping rhizomes; stems 30-110 cm tall, arising singly or a few together, shorter than the leaves, dark red at the bases.

Leaves: Sheaths tight, breaking into threads at the base; blades 2 to 5 per stem, flat, with margins flat or nearly so, borne on lower 1/2 of the stems, 2-5 mm wide, the lower ones reduced; ligules long, membranaceous.

Flowers: Spikes 3 to 5, the terminal 2 (sometimes 1 or 3) linear, 1-2.5 cm long, long-stalked, with many male flowers, the lower spikes 2 to 3, cylindrical, with female flowers, unstalked to short-stalked, erect; bracts subtending the lowest spike leaflike, sheathless or short-sheathing, the lowest usually longer than the inflorescence.

Fruits: Perigynia egg-shaped to nearly globe-shaped, 3.3-5 mm long, 1.8-2 mm wide, dull brownish-green, somewhat inflated, densely soft-hairy, the numerous ribs obscured, the bases round, unstalked, the beaks 0.8-1.5 mm long, deeply bidentate, the teeth 0.3-0.9 mm long; female scales lanceolate, long-pointed or awned, more or less fringed, narrower and from slightly longer to shorter than the perigynia, reddish-brown, with 3-nerved, green centres and translucent margins; stigmas 3; achenes 3-angled, with concave sides, the angles blunt, smooth, 1.5-2 mm long.

*Carex laeviculmis**Carex lanuginosa*

Carex lapponica* O. F. Lang (*C. canescens* L. var. *subloliacea* [Laest.] Hartman)*Lapland sedge****HABITAT/RANGE:**

Peat bogs and open bog forests in the montane zone; rare in NE BC; circumpolar, N to AK and YT; Eurasia.

DESCRIPTION:

General: Perennial, somewhat tufted herb from short fibrous rhizomes; stems 15-30 cm tall, longer than the leaves.

Leaves: Sheaths tight; blades several, borne on the lower part of the stem, 1-2.5 mm wide, flat.

Flowers: Spikes 3 to 7, well separated, egg-shaped, few-flowered, 2.5-4 mm long, ascending, with both female and male flowers, the female flowers towards the tips, the male flowers inconspicuous; lowermost bract awnlike, about 0.5-2 cm long.

Fruits: Perigynia egg-shaped, 1.8-2 mm long, 0.6-0.9 mm wide, light green, minutely whitish-dotted, biconvex, smooth, obscurely ribbed, especially above, unstalked, the beaks about 0.2 mm long, smooth, entire; female scales egg-shaped, covering about 3/4 of the perigynia, pointed, pale brown with greenish midribs; stigmas 2; achenes lens-shaped, 1.2-1.7 mm long, filling the perigynia.

Carex lasiocarpa* Ehrh. (*C. lasiocarpa* ssp. *americana* [Fern.] Löve & Bernard)*slender sedge****HABITAT/RANGE:**

Bogs, swamps, shorelines, marshes and fens in the lowland, steppe and montane zones; frequent in S BC south of 56° N, rare northward, absent on N Vancouver Island, the Queen Charlotte Islands and adjacent mainland; circumpolar, N to AK, YT and NT, E to NF and S to MA, VA, OH, IN, IL, IA, NE, CO, UT, ID and CA; Eurasia.

DESCRIPTION:

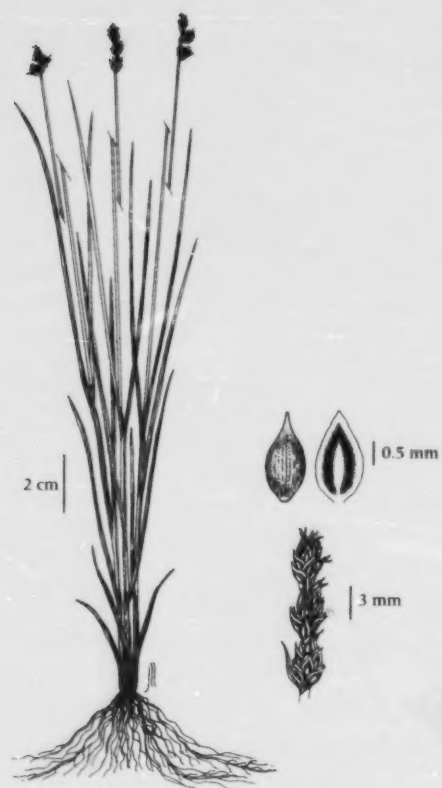
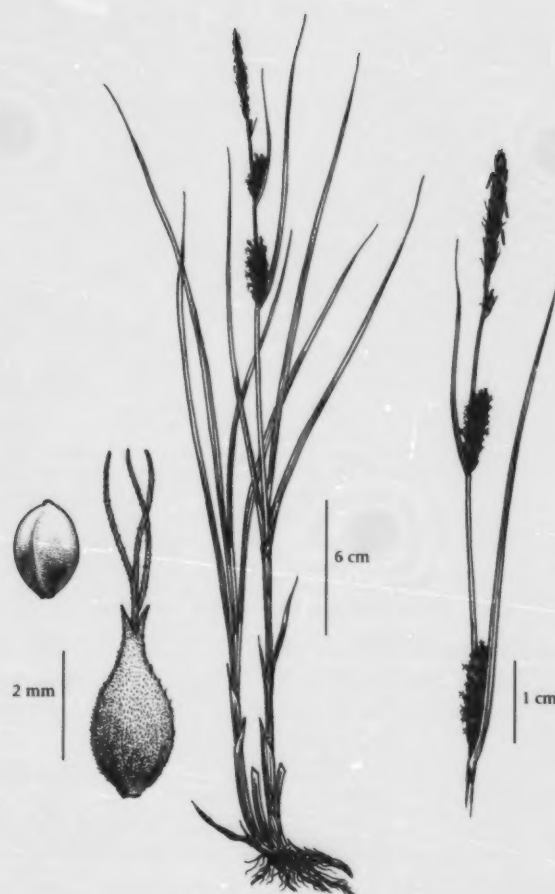
General: Perennial, loosely tufted herb from long, creeping rhizomes; stems 30-120 cm tall, arising singly or a few together, shorter than the leaves, wine-red at the bases.

Leaves: Sheaths tight, cross-wrinkled, yellowish- to brownish-tinged, the lowest ones breaking into threads; blades 2 to 5 per stem, flat at the bases, strongly in-rolled above, borne on the lower 3/4 of the stem, 1-2 mm wide, the lower ones reduced; ligules short, thick, as long as wide.

Flowers: Spikes 3 to 5, the terminal 2 (sometimes 1) linear, 1-2.5 cm long, long-stalked, with many male flowers, the lower 2 or 3 spikes cylindrical, with female flowers, unstalked to short-stalked, erect; bracts subtending the lowest spike leaflike, sheathless or short-sheathing, the lowest usually longer than the inflorescence.

Fruits: Perigynia egg-shaped to nearly globe-shaped, 2.8-4.5 mm long, 1.8-2 mm wide, dull brownish-green, somewhat inflated, densely soft-hairy, the numerous ribs obscured, the bases round, short-stalked, the beaks 0.8-1.2 mm long, deeply bidentate, the teeth 0.3-0.7 mm long; female scales lanceolate to narrowly egg-shaped, long-pointed or awned, more or less fringed, narrower and slightly longer to shorter than the perigynia, purplish-brown, with 3-nerved, green centres, with dull, narrow, translucent margins; stigmas 3; achenes 3-angled, with concave sides and blunt angles, smooth, 1.5-2 mm long.

Notes: North American plants have been treated as ssp. *americana* (Hitchcock *et al.* 1969, Boivin 1992). Koyama (1962), Hermann (1970), Egorova (1999) and others consider our material to be identical to that in Eurasia.

*Carex lapponica**Carex lasiocarpa*

Carex lenticularis Michx. (*C. eurystachya* E.J. Herm., *C. plectocarpa* E.J. Herm., *C. enanderi* Hult. = var. *dolia*; *C. hindsii* Clarke = var. *limnophila*; *C. kelloggii* Boott = var. *lipocarpa*)

lakeshore sedge (var. *lenticularis*), Enander's sedge (var. *dolia*), Hinds' sedge (var. *limnophila*), Kellogg's sedge (var. *lipocarpa*)

HABITAT/RANGE:

Marshes and wet meadows in the lowland zone (var. *limnophila*), streamsides and ponds in the subalpine and alpine zones (var. *dolia*), wet meadows, sandy beaches and marsh edges in the lowland zone (var. *lenticularis*), and bogs and wet sites in all but the alpine zone (var. *lipocarpa*); var. *dolia* – rare in W and SE BC; var. *limnophila* – frequent in coastal BC; var. *lenticularis* – rare in and E of the Coast-Cascade Mountains in S BC, and var. *lipocarpa* – common throughout BC south of 56° N, rare in NW BC; var. *dolia* – N to SE AK, E to SW AB and S to NW MT; var. *limnophila* – N to SE AK and S NW CA; var. *lenticularis* – N to NT, E to NF and S to MA, NY, MI, WI, MN, MT and ID; and var. *lipocarpa* – N to SE AK, E to AB and S to NM, AZ and CA.

DESCRIPTION:

General: Perennial, densely clumped herb from short rhizomes; stems triangular, with smooth edges, slightly rough below the inflorescence, 10-90 cm tall, shorter than to slightly longer than the leaves.

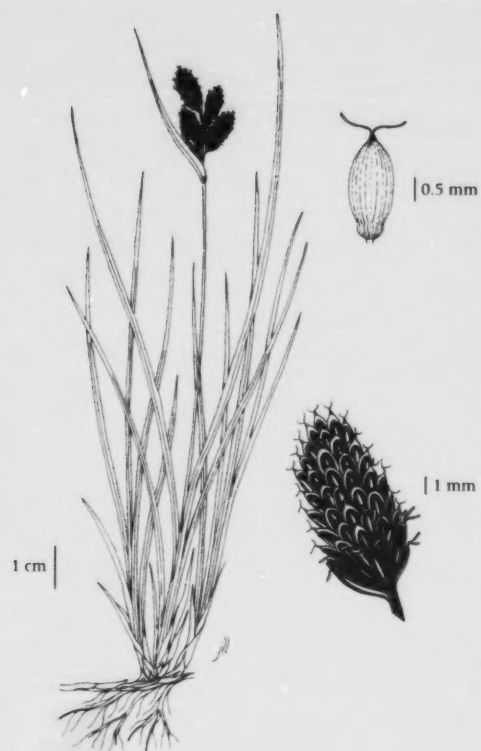
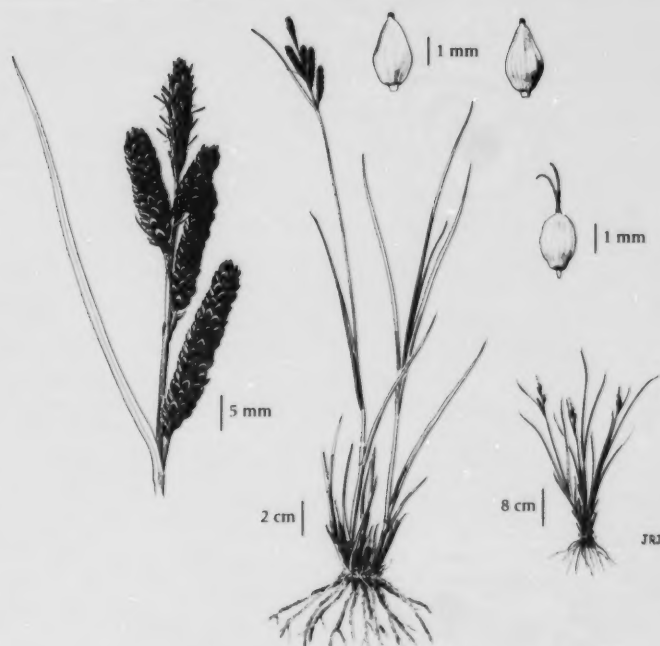
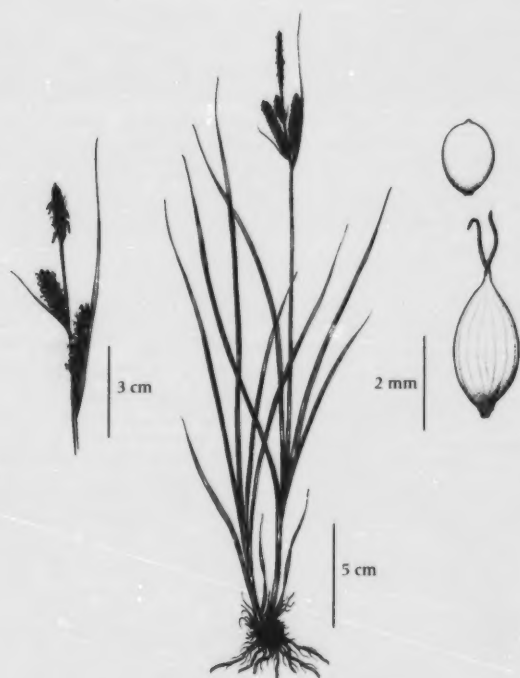
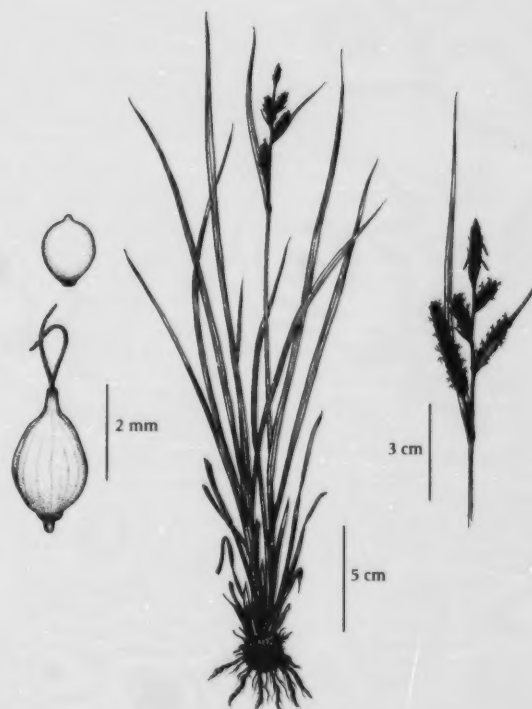
Leaves: Sheaths tight, short; blades flat, arising from the lower part of the stem to well distributed along the stem, 1.5-4 mm wide, the lower ones reduced, slightly reduced, or not.

Flowers: Spikes 3 to 9, the terminal spike with male flowers, occasionally with female flowers on the top, the lower spikes 2 to 8, with female flowers, unstalked or with short stalks (the lowermost spike occasionally on a long stalk), 1-5 cm long, erect; lowermost bract subtending the spikes leaflike or scalelike, sheathless, with pale green, purplish-brown, brown, or blackish-brown ear-shaped lobes at the bases, exceeding the inflorescence, the upper bracts reduced.

Fruits: Perigynia egg-shaped, 1.8-3.6 mm long, 1-2.2 mm wide, bluish-green, brownish-green or green, 3-angled, the angles rounded, with 5 to 7 nerves on each side, unstalked or with short stalks, easily falling off when ripe, the beaks minute or short, up to 0.5 mm long; female scales egg-shaped, shorter to longer than and sometimes narrower than the perigynia, light green to reddish-brown, or purplish or blackish-brown, with broad, lighter centres, with prominent translucent margins; stigmas 2; achenes lens-shaped, 1.1-1.8 mm long.

Notes: Four varieties occur in BC:

1. Terminal spike with female flowers at the top and a few male flowers at the bases, the basal spike up to 1.5 cm long, with a stalk up to 1 cm long var. *dolia* (M.E. Jones) Standley
1. Terminal spike with all flowers male, the basal spike up to 5 cm long, with a stalk up to 5 cm long.
 2. Female scales light brown; perigynia beaks green; ear-shaped lobes at the base of the involucre bract white var. *lenticularis*
 2. Female scales purplish-brown or blackish; perigynia beaks purplish-brown; ear-shaped lobes at the base of involucre bract generally purplish-brown.
 3. Basal spikes 4-6 mm wide; perigynia stalks 0.4-0.7 mm long; inflorescence compact var. *limnophila* (Holm) Cronq.
 3. Basal spikes 3-4 mm wide; perigynia stalks up to 0.4 mm long; inflorescence diffuse var. *lipocarpa* (Holm) Standley

*Carex lenticularis* var. *dolia**Carex lenticularis* var. *lenticularis**Carex lenticularis* var. *limnophila**Carex lenticularis* var. *lipocarpa*

***Carex leptalea* Wahlenb.** (*C. leptalea* var. *tayloris* Boivin = ssp. *leptalea*, *C. jimcalderi* Boivin = ssp. *pacifica*)
bristle-stalked sedge

HABITAT/RANGE:

Bogs, swamps, shorelines and fens in the lowland, steppe and montane zones; frequent throughout BC west (ssp. *pacifica*) and east (ssp. *leptalea*) of the Coast-Cascade Mountains; ssp. *pacifica* – N to AK and YT; ssp. *leptalea* – N to AK, YT, NT, E to NF and S to ME, PA, NC, TN, AR, OK, NM, UT and CA.

DESCRIPTION:

General: Perennial, densely tufted herb from slender rhizomes; stems 15-70 cm tall, slightly shorter to longer than the leaves.

Leaves: Sheaths tight, concave to blunt at the mouths; blades 2 to 3 per stem, flat or channeled, borne on the lower 1/4 of the stem, about 0.7-1.5 mm wide.

Flowers: Spikes solitary, with both female and male flowers, the few, often inconspicuous, male flowers towards the tips, 0.4-1.6 cm long, 2-3 mm wide, narrowly cylindrical, erect; bractless.

Fruits: Perigynia few, cylindrical or elliptical, 2.5-5 mm long, 1-1.5 mm wide, yellowish-green to pale green, many nerved, long-stalked, the tips blunt, more or less entire, beakless; male scales rounded to pointed at the tips, fused below, appressed, yellowish-green, the conspicuous midribs green, the female scales egg-shaped, longer than the perigynia, soon deciduous, rounded or pointed, the lowermost usually awned, yellowish-green to pale brown, the centres lighter; stigmas 3; achenes 3-angled, 1.5-2 mm long.

Notes: Two subspecies can be distinguished in BC:

1. Female scales rounded; perigynia 2.5-3.5 mm long; E of the Coast-Cascade Mountains ssp. *leptalea*
1. Female scales long-pointed to awned; perigynia 3.5-5 mm long; W of the Coast-Cascade Mountains ssp. *pacifica* Calder & Taylor

***Carex limosa* L.**

shore sedge; bog sedge

HABITAT/RANGE:

Bogs, fens and shorelines in the lowland, montane and subalpine zones; frequent throughout BC except absent on the Queen Charlotte Islands; circumpolar, N to AK, YT and NT, E to NF and S to NJ, PA, OH, IN, IL, IO, NE, NM, UT, NV and CA; Iceland, Eurasia.

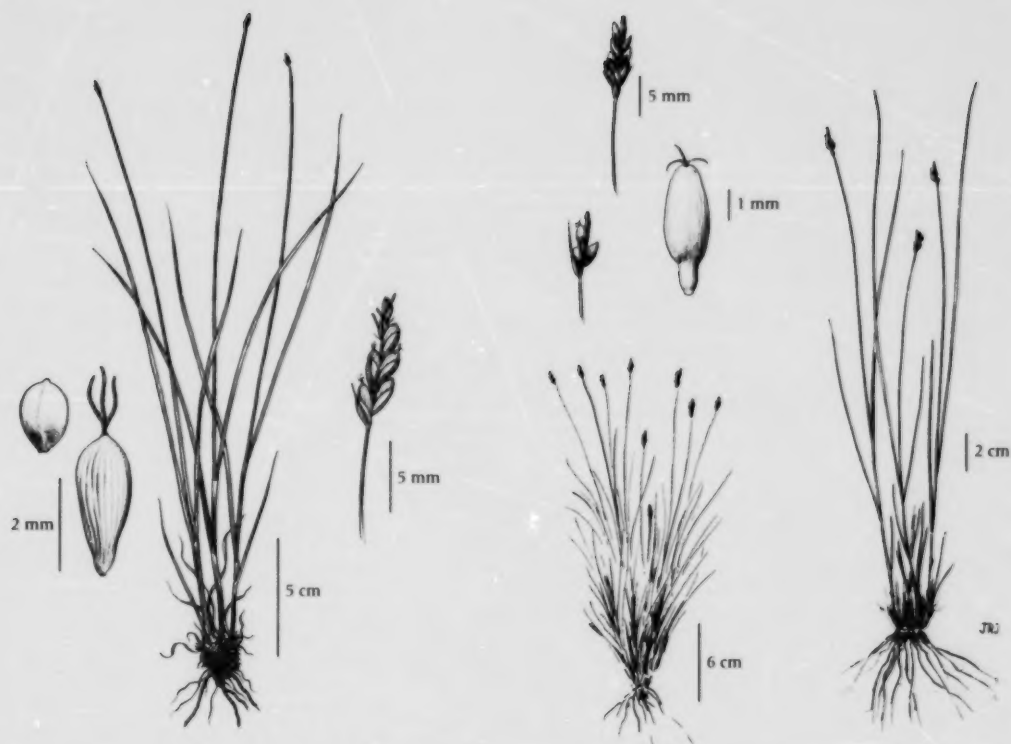
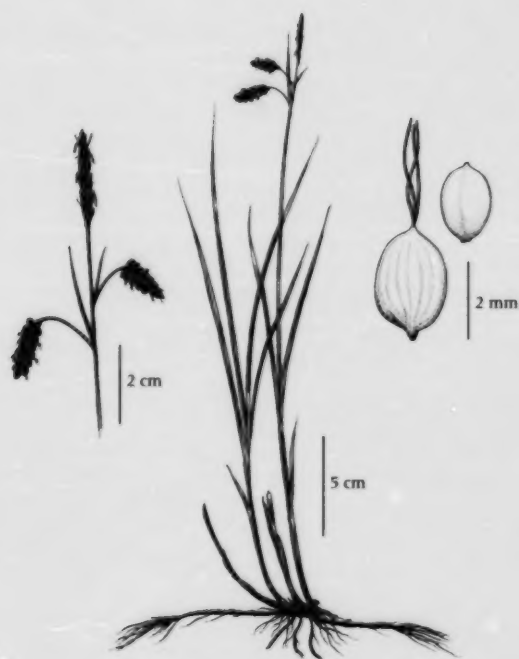
DESCRIPTION:

General: Perennial herb from long, creeping rhizomes and rusty-reddish roots; stems 20-60 cm tall, arising singly or a few together, much longer than the leaves, usually reddish at the bases.

Leaves: Sheaths tight, sometimes breaking into threads at the bases; blades 1 to 3 per stem, deeply channeled, borne on the lower 1/3 of the stem, 1-2 mm wide, the lower ones reduced.

Flowers: Spikes 2 to 4, the terminal one linear, 1.5-2.7 cm long, long-stalked, with male flowers, the lower spikes 1 to 3, with female flowers, cylindrical, 1-2.5 cm long, slightly separate, long-stalked, nodding; bracts subtending the lowest spike leaflike, 2-10 cm long, sheathless or short-sheathing, shorter than the inflorescence, the others reduced.

Fruits: Perigynia egg-shaped to elliptical, 2.3-4.2 mm long, 1.8-2 mm wide, green, somewhat compressed, densely pimpled, with 2 prominent marginal nerves and 4 to 7 other nerves on each face, short-stalked, beakless or short-beaked, the beaks cylindrical, 0.5-2 mm long; female scales egg-shaped to nearly globe-shaped, rounded to pointed or long-pointed, about as long as and as wide as the perigynia, light to dark brown, with lighter, 3-nerved centres; stigmas 3; achenes 3-angled, unstalked, smooth, 1.5-2.2 mm long.

*Carex leptalea* ssp. *leptalea**Carex leptalea* ssp. *pacifica**Carex limosa*

Carex livida* (Wahlenb.) Willd. var. *radiculis* Paine** (*C. livida* var. *grayana* [Dewey] Fern.)**pale sedge*HABITAT/RANGE:**

Bogs, fens, swamps and moist to wet open forests in the lowland and montane zones; common along the coast, less frequent in E BC (Rocky Mountains); disjunct circumpolar, N to AK, YT and NT, E to NF and S to MA, NY, MI, WI, MN, CO, ID and OR; Iceland, N Europe and E Asia.

DESCRIPTION:

General: Perennial herb from slender, creeping rhizomes; stems 5-60 cm tall, arising singly or a few together, shorter or longer than the leaves.

Leaves: Sheaths smooth, thin, some lower ones persisting; blades 6 to 12 per stem, bluish-green, channeled, borne on the lower 1/3 of the stem, 0.5-3.5 mm wide.

Flowers: Spikes 2 to 4, the terminal one linear, 1-2.5 cm long, with male flowers, the lower spikes 1 to 3, cylindrical, with female flowers, the lower more or less remote and long-stalked, the upper unstalked or short-stalked, erect; bracts subtending the lowest female spikes sheathing, leaflike, sometimes exceeding the inflorescence, the upper bracts awnlike.

Fruits: Perigynia egg-shaped, 3.5-4.5 mm long, 1.5-2 mm wide, light green or whitish, densely pimpled, with 2 marginal nerves, numerous, crowded, spreading, short-stalked, tapering to the tips, beakless; female scales egg-shaped, equalling or slightly shorter than the perigynia, purplish-brown, the centres pale green, the margins wide, translucent, the tips round; stigmas 3; achenes 3-angled, 2-2.5 mm long.

Carex loliacea* L.*ryegrass sedge****HABITAT/RANGE:**

Marshes, streambanks, fens and wet forests in the montane zone; infrequent in BC north of 51° N; circumpolar, N to AK, YT, and NT and E to ON; Eurasia.

DESCRIPTION:

General: Perennial, loosely tufted herb with elongated stolons; stems 20-40 cm tall, about as long as the leaves or longer.

Leaves: Sheaths tight; blades numerous, borne on the lower part of the stem, 1-2.5 mm wide, flat.

Flowers: Spikes 2 to 5, widely separated on the top of the stem in a 3- to 5-cm long, narrow, interrupted head, occasionally with a few spikes separate below, egg-shaped, many-flowered, 5-8 mm long, ascending, with both female and male flowers, the female flowers towards the tips, the male flowers inconspicuous; lowermost bract awnlike, about 0.5-1 cm long; upper bracts reduced.

Fruits: Perigynia narrowly elliptical, 2.5-3 mm long, 0.6-0.8 mm wide, pale green, dark green or brownish, minutely whitish-dotted, biconvex, smooth, finely nerved, unstalked, beakless; female scales egg-shaped, covering about 1/2 of the perigynia, pointed, whitish-green, with green midribs; stigmas 2; achenes lens-shaped, 1.2-1.7 mm long.

Carex luzulina* Olney var. *ablata* (Bailey) F.J. Herm.** (*C. ablata* Bailey, *C. luzulina* auct. pro parte, non Olney)**woodrush sedge*HABITAT/RANGE:**

Moist meadows and bogs in the montane to alpine zones; locally frequent in SW BC; S to WY, UT, NV and CA.

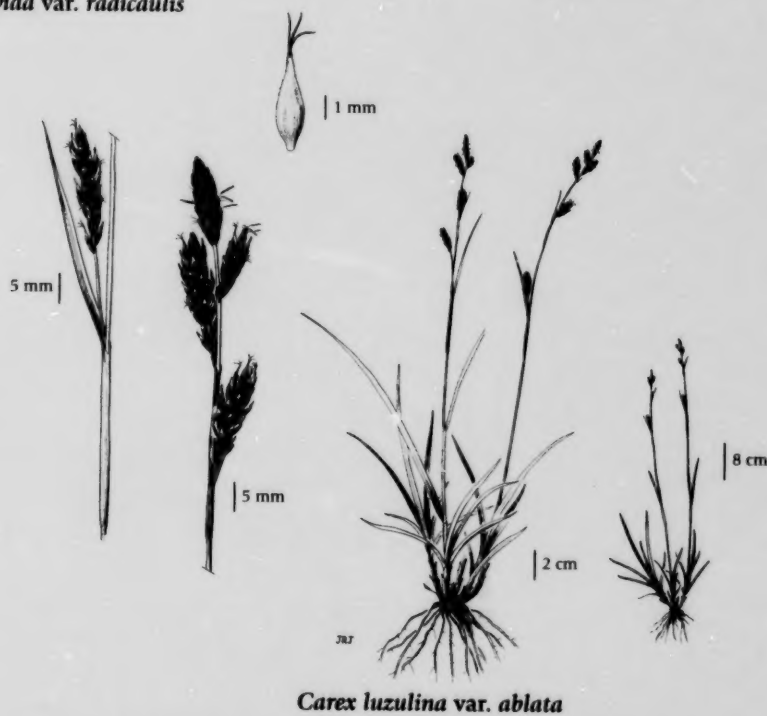
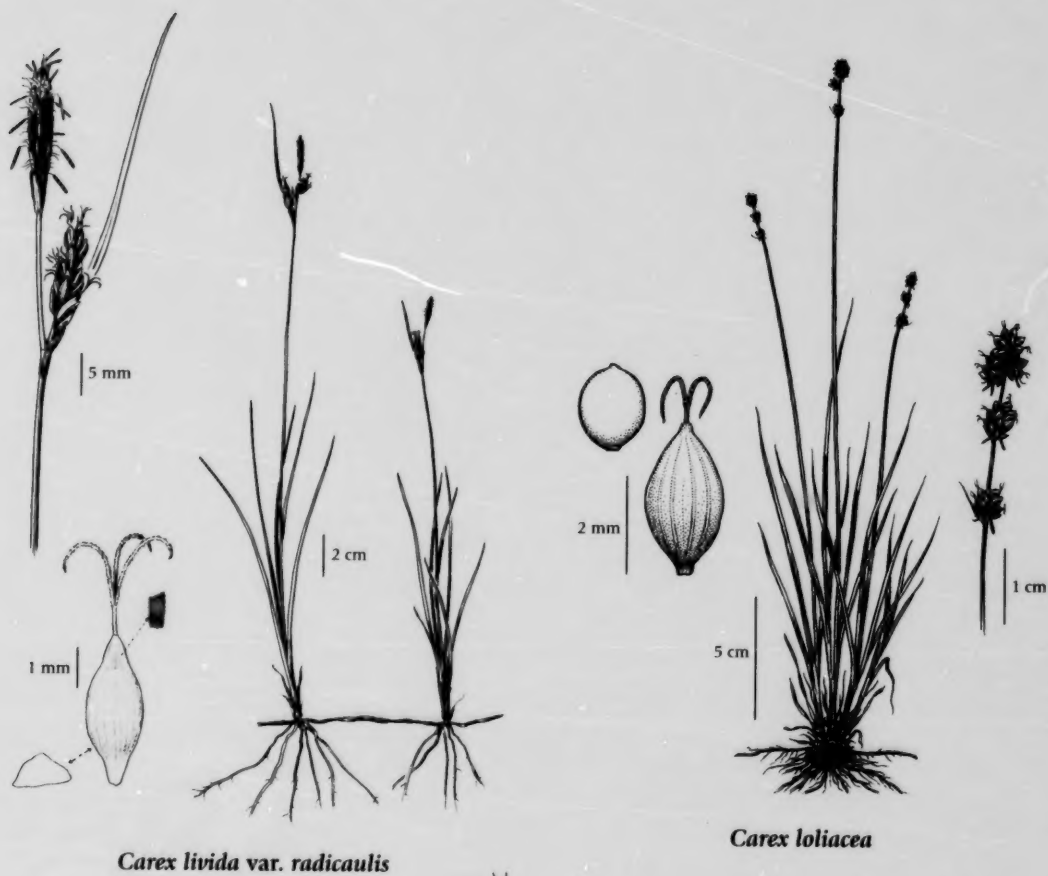
DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems 15-60 cm tall, much exceeding the leaves.

Leaves: Sheaths blunt; blades flat, 3-9 mm wide, the lower ones slightly reduced.

Flowers: Spikes 3 to 6, crowded, erect, 1-3 cm long, the upper unstalked, the lower short-stalked, the terminal one with male flowers, unstalked or nearly so, 1-2 cm long, the lower 2 to 5 spikes of female flowers, sometimes with male flowers towards the tips; bracts subtending the lowest spike with sheaths 1-4.5 cm long and blades 1-8 cm long, the blades much shorter than the inflorescence.

Fruits: Perigynia lanceolate or narrowly egg-shaped, 3-5 mm long, 1-1.5 mm wide, smooth or often minutely rough, flattened, with 2 prominent nerves, the margins fringed with teeth near the tips, the beaks scarcely or shortly bidentate, about 1 mm long, 1/4 to 1/3 the length of the perigynia bodies; female scales egg-shaped, shorter than the perigynia, round at the tips, more or less fringed, purplish-black, the centres paler, the margins translucent; stigmas 3; achenes 3-angled, 1.4-1.7 mm long.



Carex lyngbyei Hornem. ssp. *cryptocarpa* (C. A. Mey.) Hult. (*C. cryptocarpa* C.A. Mey, *C. lyngbyei* var. *robusta* [Bailey] Cronq.)

Lyngbye's sedge

HABITAT/RANGE:

Salt marshes, estuaries and wet saline meadows in the lowland zone; common along the coast; amphiberian, N to AK and S to CA; coastal E Asia.

DESCRIPTION:

General: Perennial herb from long, creeping rhizomes; stems 15-150 cm tall, arising singly or in small clumps, longer than the leaves.

Leaves: Sheaths tight; ligules as long as wide; blades 4 to 8 per stem, flat, the margins rolled-under, borne on the lower 1/2 of the stem, 2-12 mm wide, the lower ones reduced, persistent.

Flowers: Spikes 4 to 7, the terminal 2 or 3 linear, 1.5-5 cm long, long-stalked, with many male flowers, the lower spikes 2 to 4, narrowly cylindrical, 1.5-5 cm long, with female flowers, or some with male flowers above the female flowers, short-stalked, usually spreading or nodding; bracts subtending the lowest spike leaflike, sheathless or short-sheathing, the lowest longer than the inflorescence.

Fruits: Perigynia elliptical to broadly egg-shaped, 2.5-3.5 mm long, 1-1.2 mm wide, yellowish-green or brown, somewhat inflated, smooth, shiny, 2-ribbed, the bases round, short-stalked, the beaks short, 0.1-0.3 mm long, entire or nearly so; female scales lanceolate to egg-shaped, long-pointed or awned, narrower than and exceeding the perigynia, purplish-brown, with 3-nerved, lighter centres and narrow, translucent margins; stigmas 2; achenes lens-shaped, minutely pimpled, sometimes with deep constrictions, 1.9-2.4 mm long.

Carex macloviana d'Urv.

Falkland Island sedge

HABITAT/RANGE:

Lakeshores and moist to mesic meadows, forests, grassy slopes and shrub carrs and forest openings in the montane to alpine zones; frequent in N BC, rare in S BC in and east of the Coast-Cascade Mountains; disjunct circumpolar, N to AK, YT and NT, disjunct to Labr., S to WY and CO; Greenland, Iceland, N Europe, S Chile, Falkland Islands.

DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems sharply triangular, 20-50 cm tall, exceeding the leaves.

Leaves: Sheaths tight; blades flat, 2-4 mm wide, borne on the lower 1/3 of the stem.

Flowers: Spikes 5 to 10 aggregated into a dense, triangular egg-shaped head, 1-2.5 cm in diameter, unstalked, with both female and male flowers, the female ones towards the tips; bracts subtending the spikes sheathless, reduced, inconspicuous.

Fruits: Perigynia egg-shaped, 3-4.5 mm long, 1-1.5 mm wide, dark green to brown, with copper-brown edges, the margins winged nearly to the bases and the upper 1/2 fringed with teeth, lightly several-nerved on the backs, with faint nerves or nerveless below, the beaks shallowly bidentate, up to 1 mm long, narrowly margined and toothed below; female scales elliptical, brown, with broad translucent margins, somewhat shorter and narrower than the perigynia; stigmas 2; achenes lens-shaped, 0.8-1.3 mm long.

*Carex lyngbyei* ssp. *cryptocarpa**Carex macloviana*

Carex macrocephala Willd. ex Spreng. (*C. anthericoides* Presl, *C. macrocephala* ssp. *anthericoides* [Presl] Hult., *C. macrocephala* var. *bracteata* Holm)

large-headed sedge

HABITAT/RANGE:

Sand beaches and dunes in the lowland zone; infrequent in coastal BC; amphiberian, N to AK and S to OR; coastal E Asia.

DESCRIPTION:

General: Perennial herb from long, spreading rhizomes; stems 10-30 cm tall, arising singly or a few together, usually shorter than the leaves.

Leaves: Sheaths brownish or blackish, breaking into threads at the bases, persistent; blades 2 to 5 per stem, channeled, gradually tapering to the tips, 4-8 mm wide.

Flowers: Spikes either male or female, unstalked, the male inflorescence with many aggregated spikes in a cylindrical, 3.5- to 5-cm long by 1- to 1.5-cm wide head, the female inflorescence with many aggregated spikes in a cylindrical to egg-shaped, 3.5-8 cm long by 2.5-5 cm wide head; bracts lacking in the male inflorescence, the female inflorescence with several to numerous bracts enlarged at the bases, with small-bristled teeth, up to 6 cm long.

Fruits: Perigynia lanceolate to egg-shaped, 1-1.5 cm long, 4-6 mm wide, brownish to brownish-yellow, plano-convex, with small-bristled teeth above, shiny, strongly nerved on both faces, crowded, ascending to spreading, short-stalked, the beaks 5-7 mm long, as long as the bodies of the perigynia, bidentate; female scales egg-shaped, dark to light brown, with translucent margins, usually shorter and narrower than the perigynia; stigmas 3; achenes lens-shaped, 3.5-4 mm long.

Carex macrochaeta C.A. Mey.

large-awned sedge

HABITAT/RANGE:

Moist to wet meadows, heaths, streambanks, and beaches in the lowland to subalpine zones; common in and W of Coast-Cascade Mountains, frequent E of Coast-Cascade Mountains; amphiberian, N to AK and S to OR; NE Asia, Japan.

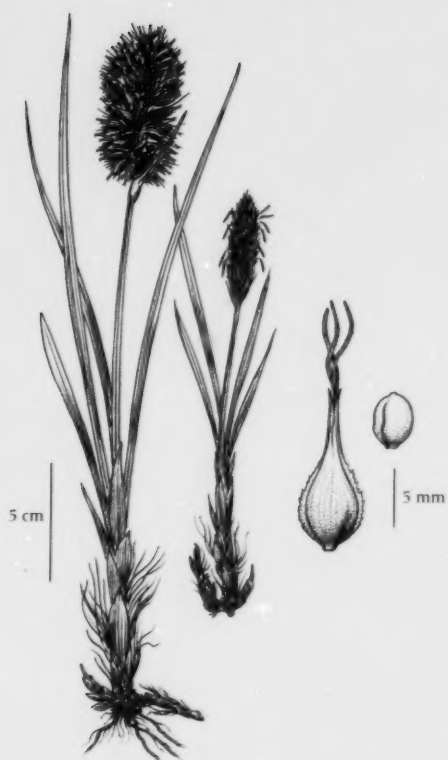
DESCRIPTION:

General: Perennial, loosely tufted herb from short, branching rhizomes, the roots soft-hairy; stems 10-70 cm tall, as long as or longer than the leaves, reddish-tinged at the bases.

Leaves: Sheaths tight; blades 2 to 5 per stem, flat with slightly rolled-under margins, borne on lower 1/2 of stem, 2-5 mm wide, lower ones much reduced.

Flowers: Spikes 3 to 5, the terminal one linear, 15-25 mm long, with male flowers, the lower spikes 2 to 4, with female flowers, cylindrical, 1-3 cm long, 6-8 mm wide, separate, long-stalked, ascending, the lower one nodding; bracts subtending the lowest spike leaflike, sheathless or short-sheathing, shorter or longer than the inflorescence, the others reduced.

Fruits: Perigynia narrowly egg-shaped, 3.3-5.5 mm long, 1-2.5 mm wide, usually light green, 10- to 15-nerved, short-stalked, beakless to short-beaked, 0.1-0.2 mm long; female scales egg-shaped, rounded, long-awned, the awns 3-5 mm long, as wide as and shorter or sometimes longer than the perigynia, black to dark brown, with lighter, green centres and translucent margins; stigmas 3; achenes 3-angled, stalked, smooth, 1.7-2.3 mm long.

*Carex macrocephala**Carex macrochaeta*

Carex magellanica Lam. ssp. *irrigua* (Wahlenb.) Hiitonen (*C. irrigua* [Wahlenb.] Sm. ex Hoppe, *C. paupercula* Michx.)

poor sedge

HABITAT/RANGE:

Bogs, fens and swamps, in the lowland, montane and subalpine zones; frequent throughout BC except absent on the Queen Charlotte Islands; circumpolar, N to AK, YT and NT, E to NF and S to NJ, PA, OH, IN, IL, IA, MN, CO, UT, NV and WA; Greenland, Iceland, Eurasia.

DESCRIPTION:

General: Perennial, tufted herb from short or long rhizomes, the roots yellowish-woolly; stems 10-80 cm tall, longer than the leaves, reddish-brown at the bases.

Leaves: Sheaths thin, red-dotted below; ligules conspicuous; blades 3 to 9 per stem, flat, with slightly rolled-under margins, borne on the lower 1/2 of the stem, 2-4 mm wide, the lower ones reduced.

Flowers: Spikes 3 to 5, the terminal one linear, 4-12 mm long, long-stalked, with male flowers, the lower spikes 2 to 4, with female flowers or sometimes with a few male flowers below, cylindrical, 4-22 mm long, 4-8 mm wide, separate, long-stalked, nodding; bracts subtending the lowest spike leaflike, 2-10 cm long, sheathless or short-sheathing, longer than the inflorescence, the others reduced.

Fruits: Perigynia broadly egg-shaped to broadly elliptical, 2.5-3.5 mm long, 1.3-1.8 mm wide, pale green, somewhat compressed, densely pimpled, conspicuously few-nerved, short-stalked, beakless or short-beaked, the beaks 0.5-1 mm long; female scales lanceolate to narrowly egg-shaped, long-pointed or sometimes short-awned, usually longer and narrower than the perigynia, light to dark brown, with lighter, green centres and brown margins; stigmas 3; achenes 3-angled, stalked, smooth, 1.4-1.9 mm long.

Carex media R. Br. (*C. angarea* Steud., *C. norvegica* auct. non Retz., *C. norvegica* Retz. ssp. *inferalpina* [Wahlenb.] Hult.)

Scandinavian sedge; alpine sedge

HABITAT/RANGE:

Moist to wet meadows and wet shrublands in all but the lowland zone; common throughout BC in and E of the Coast-Cascade Mountains; circumpolar, N to AK, YT and NT, E to NF and S to ME, MI, WI, IA, SD, WY, ID, NV and CA; Eurasia.

DESCRIPTION:

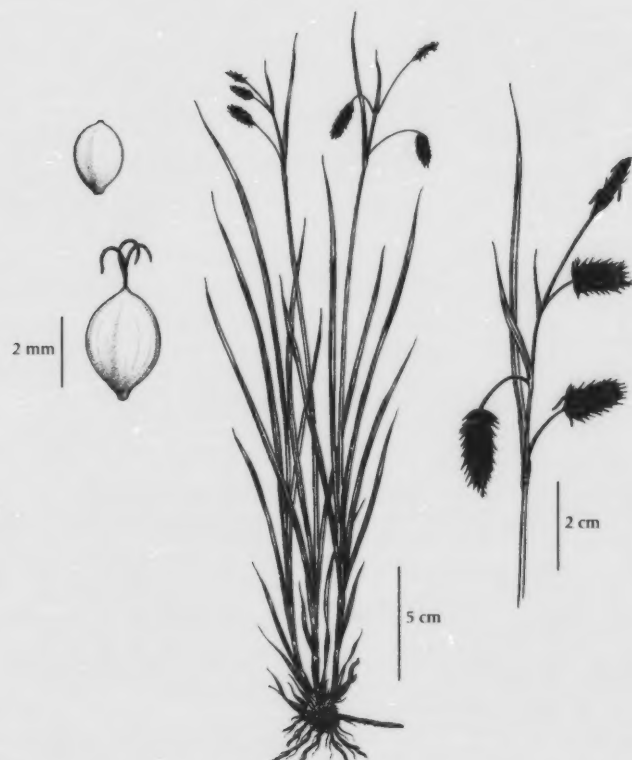
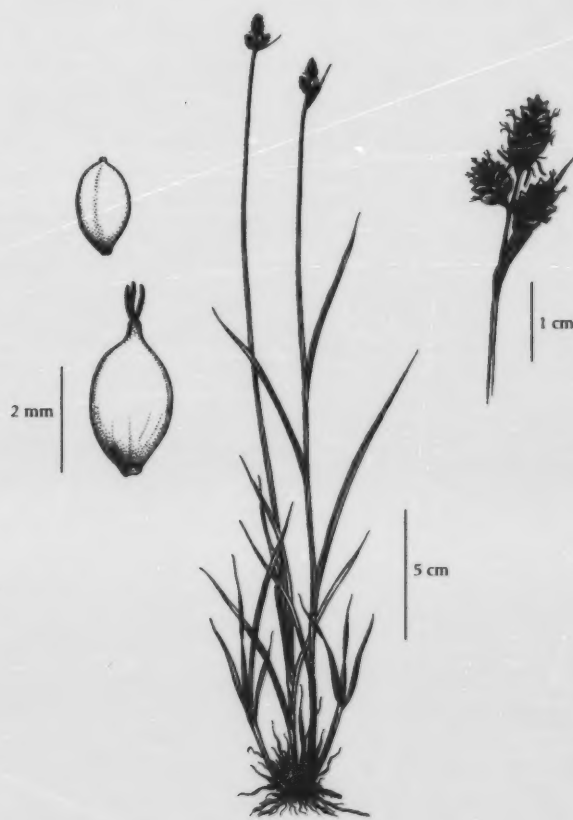
General: Perennial, tufted herb from short rhizomes and fibrous roots; stems 15-40 cm tall, exceeding the leaves.

Leaves: Sheaths purplish-red to brownish towards the bases; blades flat with rolled-under margins, 2-4 mm wide, the lower ones not reduced.

Flowers: Spikes 2 to 5, the terminal one with both female and male flowers, the female flowers at the top, the male ones below, the lower spikes 1 to 3, with female flowers, short-stalked, 0.5-1 cm long, clustered together in heads; bracts subtending the spikes sheathless, bristlelike to scalelike, mostly shorter than the inflorescence.

Fruits: Perigynia egg-shaped to elliptical, 2.5-3 mm long, 1.5-1.8 mm wide, green, brown to dark brown, nerveless or few-nerved, the beaks obscure, less than 0.3 mm long; female scales lanceolate, shorter and slightly narrower than the perigynia, pointed at the tips, brown to purplish-black, with light brown margins; stigmas 3; achenes 3-angled, 1.5 mm long.

Notes: Western taxonomists have usually included this taxon with *C. norvegica* Retz., a species of eastern N. America and the southern Rocky Mountains (Murray 1969).

*Carex magellanica* ssp. *irrigua**Carex media*

Carex membranacea Hook.

fragile sedge

HABITAT/RANGE:

Fens, bogs, shorelines and wet meadows in the montane to alpine zones; rare in extreme N BC; amphiberian, N to AK, YT and NT and disjunct E to PQ and Labr.; E Asia.

DESCRIPTION:

General: Perennial herb from long-creeping rhizomes; stems 10-50 cm tall, arising singly, triangular, rough below the inflorescence, longer than the leaves.

Leaves: Sheaths tight; ligules shorter than wide; blades 4 to 8 per stem, V-shaped, cross-walled; 2.5-5 mm wide, arising in the lower 1/3 of the stem.

Flowers: Spikes 2 to 5, the terminal 1 or 2 spikes with male flowers, the lower 1 to 3 spikes with female flowers, up to 1-3 cm long, on short stalks, erect; bracts subtending the lowest spike leaflike, sheathless or short-sheathing, the lowest shorter than the inflorescence.

Fruits: Perigynia elliptical to broadly egg-shaped or nearly globe-shaped, 2.5-4 mm long, 1.3-2.2 mm wide, obscurely few-nerved, inflated, purplish-black, shiny, the bases round, short-stalked, the beaks short, 0.1-0.3 mm long, entire or nearly so; female scales lanceolate to egg-shaped, with blunt or pointed tips, narrower and shorter than the perigynia, purplish-brown, with 3-nerved, lighter centres and narrow, translucent margins; stigmas 3; achenes 3-angled, 1.5 mm long.

Carex mertensii Prescott ex Bong.

Mertens' sedge

HABITAT/RANGE:

Roadsides, ditches, and wet meadows in the lowland and montane zones; common in BC south of 55° N, rare in NW BC; amphiberian, N to AK and S YT, E to AB and S to ID, MT and CA; E Asia.

DESCRIPTION:

General: Perennial, tufted herb from short, stout rhizomes; stems 15-100 cm tall, exceeding the leaves.

Leaves: Sheaths purplish-red towards the bases; blades flat, 2-6 mm wide, the lower ones much reduced.

Flowers: Spikes 5 to 10, the terminal one with female flowers at the top and male flowers below, the lower spikes 4 to 9, with female flowers, long-stalked, 1-4 cm long, drooping; bracts subtending the spikes sheathless, leaflike, longer than the inflorescence.

Fruits: Perigynia broadly egg-shaped, 3.5-4 mm long, 1.8-2.2 mm wide, papery thin, pale yellow to green or light brown, marginally 2-ribbed, otherwise faintly nerved, the beaks short, less than 0.4 mm long; female scales lanceolate, much shorter and narrower than the perigynia, pointed at the tips, reddish-black, with light brown margins; stigmas 3; achenes 3-angled, stalked, 1.2-1.5 mm long.

Carex microchaeta Holm ssp. *microchaeta*

small-awned sedge

HABITAT/RANGE:

Moist to mesic meadows and rocky ridges in the montane to alpine zones; common in N BC; N to AK, YT and NT.

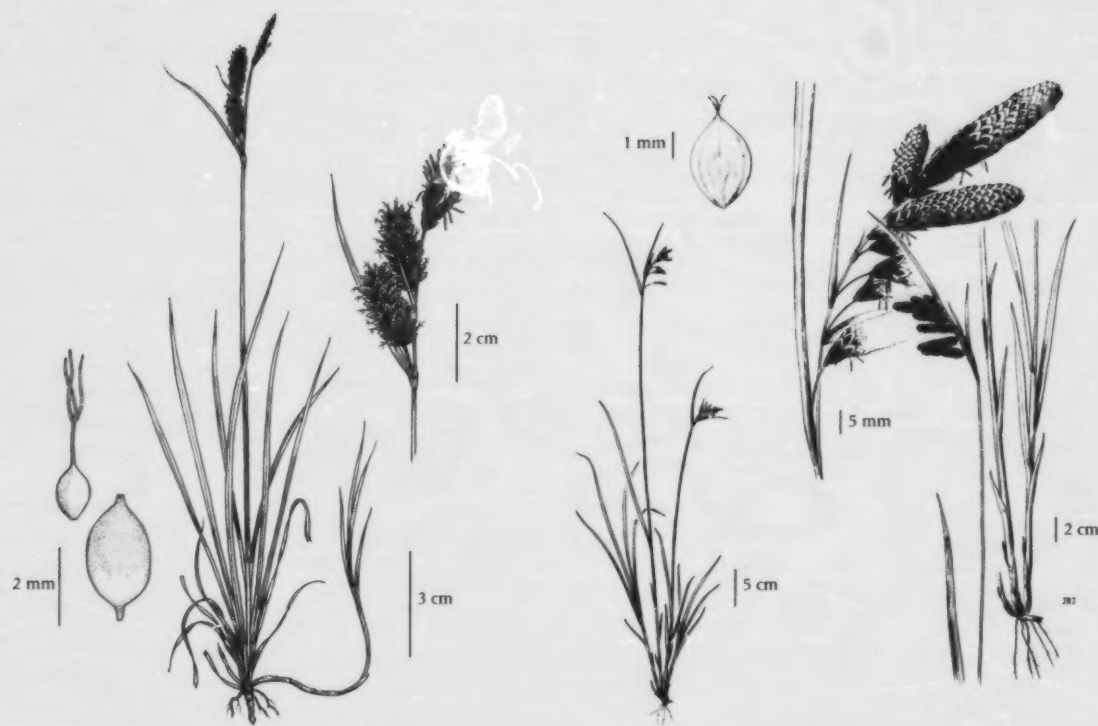
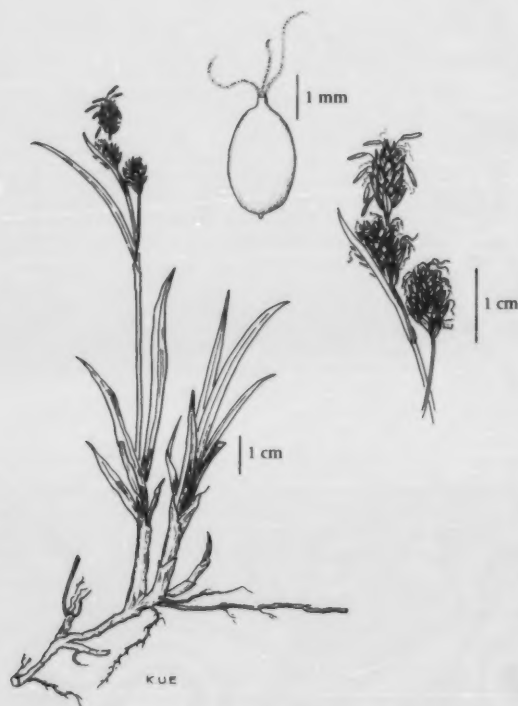
DESCRIPTION:

General: Perennial, tufted herb from short, stout rhizomes; stems 15-40 cm tall, exceeding the leaves.

Leaves: Sheaths purplish-red towards the bases; blades flat, 2-6 mm wide, the lower ones not reduced.

Flowers: Spikes 2 to 5, the terminal one with male flowers, the lower spikes 1 to 4, with female flowers, short-stalked, 0.6-2.5 cm long, erect, except the lowermost often long-stalked and nodding; bracts subtending the spikes sheathless, bristlelike to scalelike, shorter than the inflorescence.

Fruits: Perigynia narrowly egg-shaped, 2.5-4 mm long, 1.2-1.8 mm wide, reddish-brown to purplish-black, nerveless, the beaks short, less than 0.5 mm long; female scales lanceolate, as long as and narrower than the perigynia, pointed at the tips, reddish-black, with light brown margins and pale midrib; stigmas 3; achenes 3-angled, 1.2-1.5 mm long.

*Carex membranacea**Carex mertensii**Carex microchaeta* ssp. *microchaeta*

Carex microglochin Wahlenb.

few-seeded fen sedge

HABITAT/RANGE:

Shorelines, streambanks, calcareous fens and wet meadows in the montane and subalpine zones; infrequent in BC east of the Coast-Cascade Mountains and N of 52° N; circumboreal, N to AK, YT and NT and E to NF; Greenland, Iceland, Eurasia, S South America.

DESCRIPTION:

General: Perennial herb from slender rhizomes; stems 1 to 3, stiff, erect, 2-25 cm tall, much longer than the leaves.

Leaves: Sheaths brown below, tight, the ligules much longer than wide; blades 4 to 8, clustered near the base, 0.3-0.6 mm wide, margins in-rolled, stiff, erect to ascending, the tips blunt.

Flowers: Spikes solitary, 5-12 mm long, 5-9 mm wide, with both female and male flowers, the few erect male flowers towards the tips, the lower 3 to 12 flowers female, reflexed; bractless.

Fruits: Perigynia few, narrowly lanceolate, 3-5 mm long, 0.8-1 mm wide, pale green, brownish-green or straw-coloured, soon reflexed, more or less circular in cross-section, membranaceous, smooth, obscurely many-nerved, unstalked, the beaks not differentiated from the bodies; female scales narrowly egg-shaped, round-tipped, wider than and about 1/2 as long as the perigynia, light chestnut-brown, early deciduous, the margins sometimes translucent; stigmas 3; achenes 3-angled, 2-2.5 mm long.

Carex microptera Mack.

small-winged sedge

HABITAT/RANGE:

Bogs, swamps, lakeshores, ditches, wet meadows and moist forests in the montane to alpine zones; frequent throughout BC east of the Coast-Cascade Mountains; N to S YT and NT, E to SK and S to SD, NM, AZ and CA.

DESCRIPTION:

General: Perennial, tufted herb from fibrous roots, stems triangular, 30-90 cm tall, exceeding the leaves.

Leaves: Sheaths tight; blades flat, 2-4 mm wide, borne on the lower 1/3 of the stem, the lowermost leaves reduced to scales.

Flowers: Spikes 5 to 10 aggregated into a dense head 1-2.5 cm in diameter, unstalked, with both female and male flowers, the female ones towards the tips; bracts subtending the spikes sheathless, awned.

Fruits: Perigynia egg-shaped, 3-4.5 mm long, 1-1.5 mm wide, light green, straw-coloured, or light brown, the margins winged nearly to the bases, the upper 1/2 fringed with teeth, lightly several-nerved on the backs, with faint nerves or nerveless below, the beaks obscurely bidentate, up to 1.5 mm long, narrowly margined and toothed below; female scales elliptical, light brown, somewhat shorter and narrower than the perigynia; stigmas 2; achenes lens-shaped, 0.8-1.3 mm long.

Carex misandra R. Br. (*C. fuliginosa* Schkuhr ssp. *misandra* [R. Br.] Nyman)

short-leaved sedge

HABITAT/RANGE:

Dry meadows and rocky slopes in the alpine zone; rare in N BC; circumpolar, N to AK, YT and NT, E to PQ and S to CO and UT; Greenland, N Eurasia.

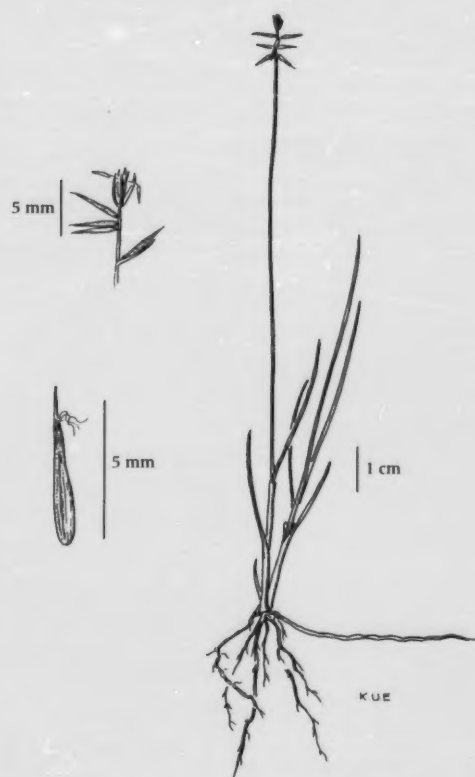
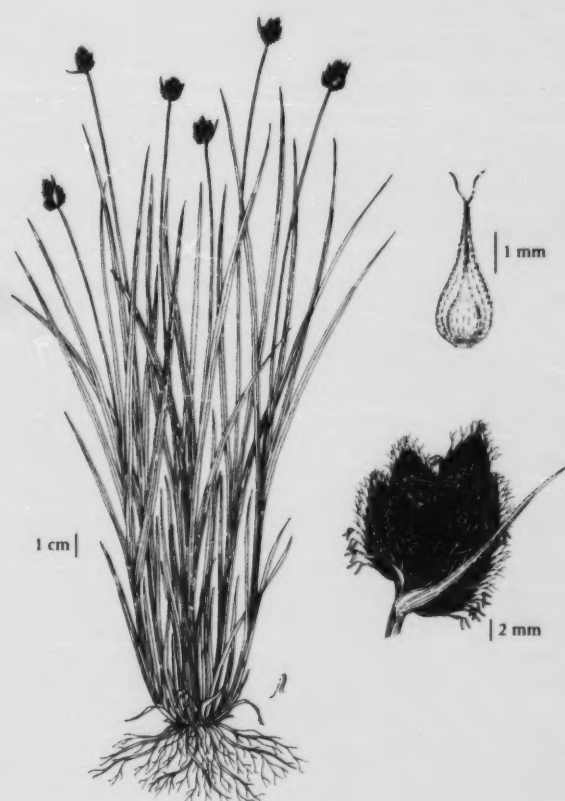
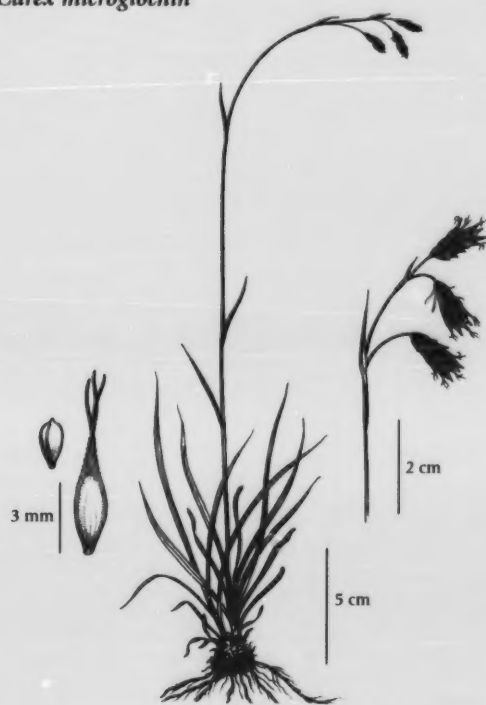
DESCRIPTION:

General: Perennial, densely tufted herb from fibrous roots; stems 5-30 cm tall, much exceeding the leaves.

Leaves: Sheaths tight; blades numerous, flat or slightly channeled, 1-4 mm wide, the lower ones reduced.

Flowers: Spikes 2 to 4, the terminal one of both male and female flowers, the female flowers towards the tips, stalked, 1-1.5 cm long, the lower spikes 1 to 3, with female flowers, approximate or more or less separate, nodding, 1-1.5 cm long, long-stalked; bracts subtending the lowest spike with a sheath 0.7-2 cm long and a blade about as long, reduced above, the blade much shorter than the inflorescence.

Fruits: Perigynia narrowly lanceolate, 3.5-5 mm long, 1-1.2 mm wide, tapering towards the ends, purplish toward the tips, smooth, fringed with hairs above, obscurely few-nerved, the beaks 1.1-1.6 mm long, bidentate; female scales narrowly egg-shaped, shorter but usually wider than the perigynia, pointed, dark purplish-black or dark brown, the margins translucent; stigmas 3; achenes 3-angled with concave sides, 1.5-2 mm long.

*Carex microglochin**Carex microptera**Carex misandra*

Carex nardina Fries (*C. hepburnii* Boott)**spikenard sedge**

HABITAT/RANGE:

Dry fellfields, ridgcrests, rock outcrops, meadows and scree slopes in the alpine zone; frequent in and E of the Coast-Cascade Mountains, rare on Vancouver Island; N to AK, YT and NT, E to AB and S to CO, UT, NV and CA.

DESCRIPTION:

General: Perennial, densely tufted herb from fibrous roots; stems 2-15 cm tall, shorter than to slightly longer than the leaves.

Leaves: Sheaths conspicuous, persistent, blunt at the mouths; blades 1 to 2 per stem, stiff, wire-like, persistent, borne on the lower 1/4 of the stem, about 0.5 mm wide.

Flowers: Spikes solitary, cylindrical to egg-shaped, 5-15 mm long, erect, with both female and male flowers, the male flowers towards the tips; bractless.

Fruits: Perigynia lanceolate to egg-shaped, 3.5-4.5 mm long, 1.2-2 mm wide, plano-convex, smooth, faintly nerved, finely toothed above, short-stalked, the beaks short, bidentate; female scales egg-shaped, about equalling the perigynia, sharp-pointed or rounded or the lowest ones awned, brownish, the midribs pale, the margins translucent; stigmas 2 or 3; achenes lens-shaped or 3-angled, about 2.5 mm long.

Carex nigra (L.) Reichard (*C. acuta* auct. non L., *C. fusca* auct. non All.)**black sedge**

HABITAT/RANGE:

Ditches and wet bogs in the lowland zone, rare in SW BC; known only from the lower Fraser Valley; introduced most probably from E North America or Europe.

DESCRIPTION:

General: Perennial, loosely clumped herb with long rhizomes; stems triangular, smooth, except rough below the inflorescence, 15-70 cm tall, exceeding the leaves.

Leaves: Sheaths tight, short; blades folded, arising mostly at the bases of the stem, 1-3 mm wide, the lower ones not reduced.

Flowers: Spikes 3 to 4, 2-3 cm long, the terminal one with male flowers, occasionally with female flowers at the tip, the lower spikes 2 to 3, with female flowers, unstalked or with short stalks, erect; lowermost bract subtending the spikes leaflike, sheathless, with black ear-shaped lobes, exceeding the inflorescence.

Fruits: Perigynia egg-shaped, 2-3 mm long, 1.5-2 mm wide, brownish-green, with 5 to 7 weak nerves on each side, the beaks short, up to 0.4 mm long; female scales egg-shaped, shorter than the perigynia, dark reddish-brown to black, with lighter 3-nerved centres and narrow translucent margins; stigmas 2; achenes lens-shaped, 1.1-1.6 mm long.

Carex nigricans C.A. Mey.**black alpine sedge**

HABITAT/RANGE:

Moist to wet meadows, stream margins and snowbed sites in the montane to alpine zones; common in BC south of 54° N, less frequent northward; N to AK, E to SW AB and S to CO, UT and OR.

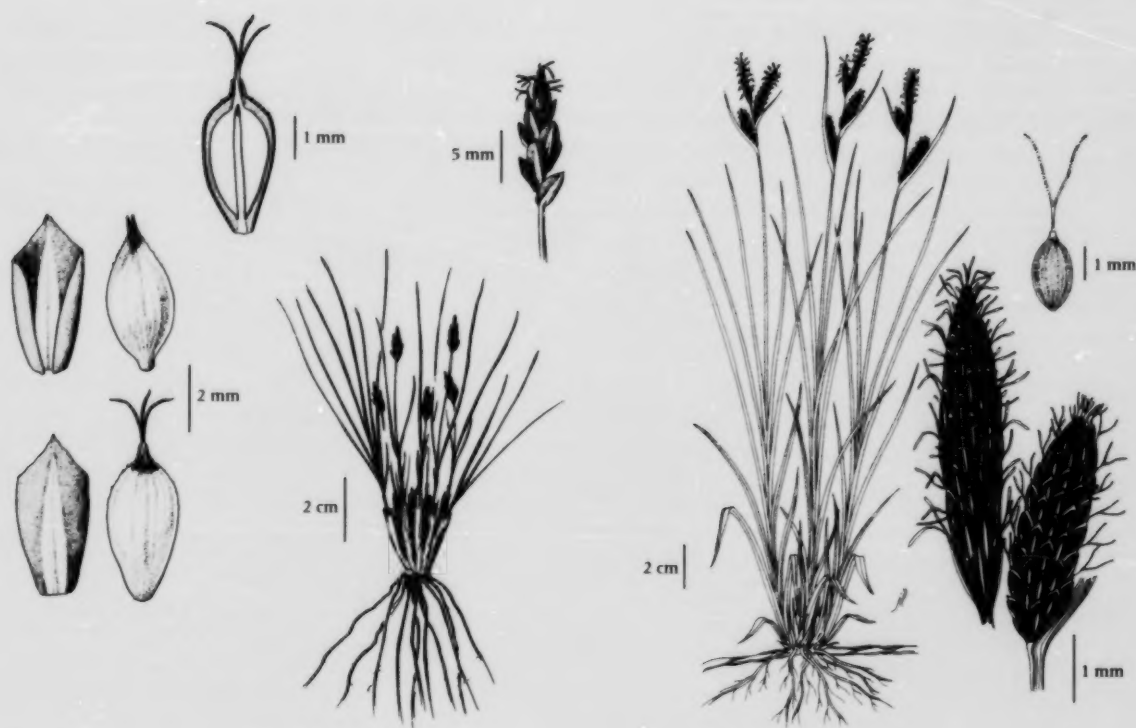
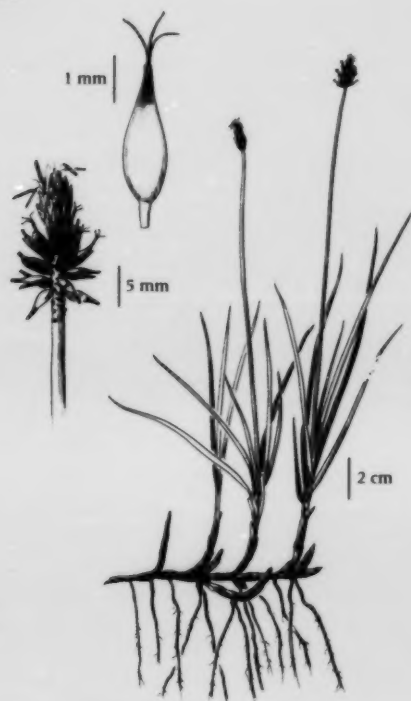
DESCRIPTION:

General: Perennial, loosely tufted herb from stout, creeping rhizomes; stems 10-35 cm tall, longer than the leaves.

Leaves: Sheaths tight, bladeless below; blades 4 to 9 per stem, flat or channeled, borne on the lower 1/4 of the stem, 1-3 mm wide.

Flowers: Spikes solitary, cylindrical to egg-shaped, 8-20 mm long, erect, with both female and male flowers, the male flowers towards the tips, rarely the spikes with all male or all female flowers; bractless.

Fruits: Perigynia lanceolate to egg-shaped, 3-4.5 mm long, 1-1.5 mm wide, appressed but spreading and reflexed at maturity, smooth, nerveless, long-stalked, the beaks short, bidentate; female scales lanceolate to egg-shaped, much shorter than the perigynia, deciduous, pointed to rounded, dark brown, the midribs pale, the margins thin; stigmas 3; achenes 3-angled, 1.5-2 mm long.

*Carex nardina**Carex nigra**Carex nigricans*

Carex obnupta* Bailey (*C. magnifica* Dewey ex Piper)*slough sedge****HABITAT/RANGE:**

Swamps, marshes, riverbanks, wet meadows and alluvial forests in the lowland zone; common in S coastal BC; S to CA.

DESCRIPTION:

General: Perennial, densely tufted herb from long, creeping rhizomes and fibrous roots, the roots with soft, reddish-brown hairs; stems 30-150 cm tall, arising a few or many together, longer than the leaves.

Leaves: Sheaths tight, cross-wrinkled, reddish- to brownish-tinged at the base, the lowest ones breaking into threads; ligules as long as wide, rounded; blades 2 to 5 per stem, flat to channeled, borne on the lower 1/4 of the stem, 3-10 mm wide, the lower ones reduced.

Flowers: Spikes 3 to 7, the terminal 2 (sometimes 1 or 3) linear, 1.5-6 cm long, long-stalked, with many male flowers, the lower spikes 2 to 4, cylindrical, 1.5-6 cm long, with female flowers, or some with male flowers above the female flowers, these short-stalked, spreading or nodding; bract subtending the lowest spike leaflike, sheathless, longer than the inflorescence, the bracts reduced above.

Fruits: Perigynia broadly egg-shaped, leathery, 2.2-3.5 mm long, 1-1.2 mm wide, greenish or brownish, biconvex, smooth, faintly nerved, marginally 2-ribbed, the bases round, short-stalked, beakless or short-beaked, the beaks 0.1-0.2 mm long, entire or nearly so; female scales lanceolate, long-pointed or awned, as wide as and much longer than the perigynia, reddish-brown to dark brown, with 3-nerved, lighter centres, with narrow, translucent margins; stigmas 2; achenes lens-shaped, sometimes constricted in the middle, smooth, 1.6-2.2 mm long.

Carex obtusata* Lilj.*blunt sedge****HABITAT/RANGE:**

Dry rocky slopes, ridges and grasslands in the steppe to alpine zones; common in SC BC (Cariboo region), frequent in N BC; circumpolar, N to AK, YT and NT, E to W ON, and S to MN, SD, NM, UT and WA; Eurasia.

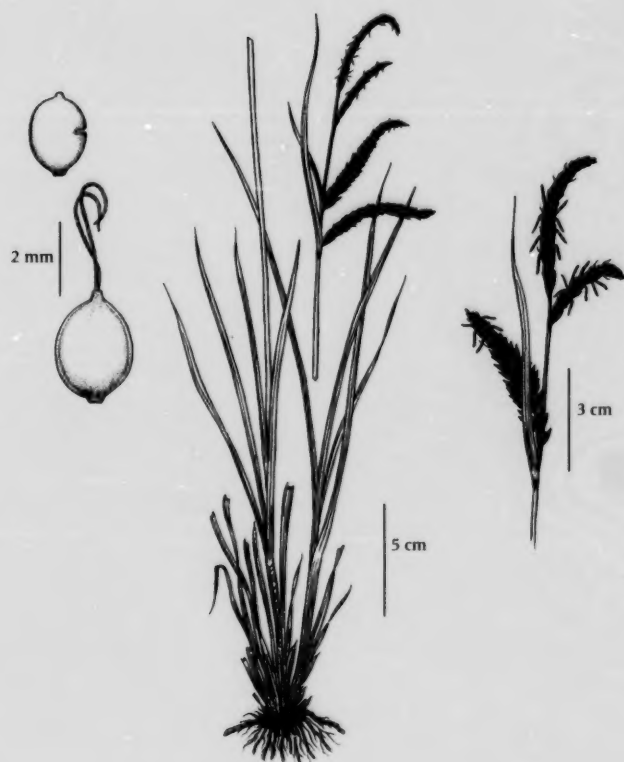
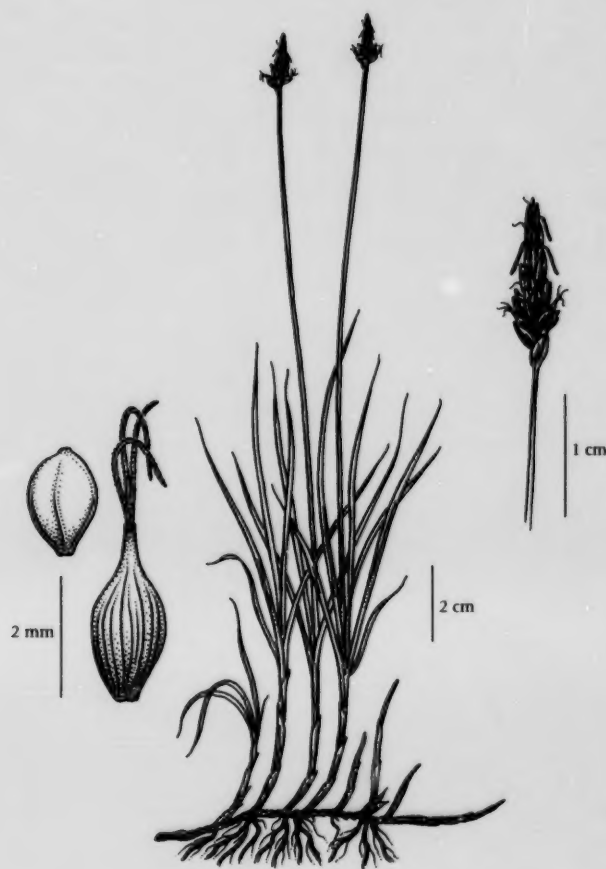
DESCRIPTION:

General: Perennial herb from slender, creeping, purple-black rhizomes; stems 5-20 cm tall, longer than the leaves, arising singly or a few together.

Leaves: Sheaths tight, blunt at the mouths; blades 4 to 8 per stem, channeled, borne near the base, 1-1.5 mm wide, the lower ones persisting.

Flowers: Spikes solitary, linear at first, expanding below at maturity, with both female and male flowers, the upper 2/3 of the spike consisting of male flowers, the female flowers below, 5-15 mm long, 3-6 mm wide, erect; bractless.

Fruits: Perigynia few, egg-shaped, 3-4 mm long, 1.5-2 mm wide, glossy, dark brown, obscurely to conspicuously ribbed, unstalked, the beaks translucent, 0.5-1 mm long, deeply bidentate; female scales narrowly egg-shaped, from slightly shorter than to slightly longer than the perigynia, sharp-pointed to short-awned, pale brown, the centres paler, the margins translucent; stigmas 3; achenes broadly 3-angled, 1-1.7 mm long.

*Carex obnupta**Carex obtusata*

Carex pachystachya Cham. ex Steud. (*C. macloviana* d'Urv. ssp. *pachystachya* [Cham. ex Steud.] Kükenth., *C. platylepis* Mack.)

thick-headed sedge

HABITAT/RANGE:

Mesic to wet sites in all vegetation zones; common throughout all but NE BC; amphiberian, N to AK, YT and NT, E to SK and S to CO, UT, NV and CA; NE Asia.

DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems triangular, with blunt edges, 20-50 cm tall, exceeding the leaves.

Leaves: Sheaths tight; blades flat, 2-4 mm wide, borne on the lower 1/3 of the stem.

Flowers: Spikes 4 to 12, aggregated into a dense head, 1-2.5 cm wide, unstalked, with both female and male flowers, the female ones towards the tips; bracts subtending the spikes sheathless, reduced, inconspicuous.

Fruits: Perigynia egg-shaped, 3-4 mm long, 1-1.5 mm wide, dark green to dark brown, the margins winged nearly to the bases, the upper 1/2 fringed with teeth, lightly several-nerved on the back, with faint nerves or nerveless below, the beaks shallowly bidentate, up to 1 mm long, narrowly margined and toothed below; female scales elliptical, chestnut-brown to dark brown, with slightly lighter midribs, somewhat shorter and narrower than the perigynia; stigmas 2; achenes lens-shaped, 1.1-1.5 mm long.

Carex pallescens L.

pale sedge

HABITAT/RANGE:

Grassy meadows and ditches in the lowland zone; rare in SW BC, known only from Hornby Island and the Vancouver area; introduced from Europe or E North America.

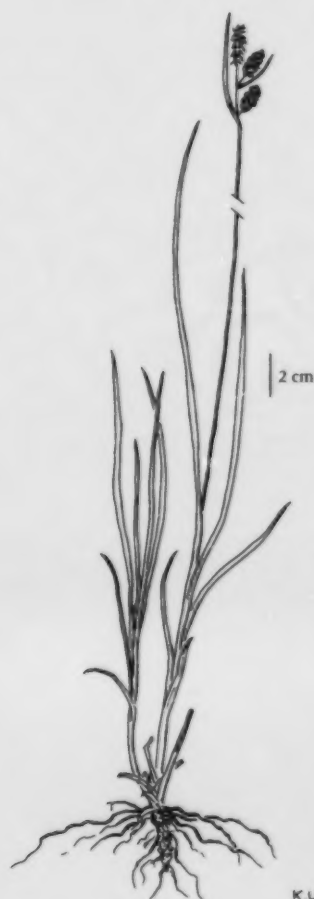
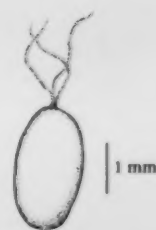
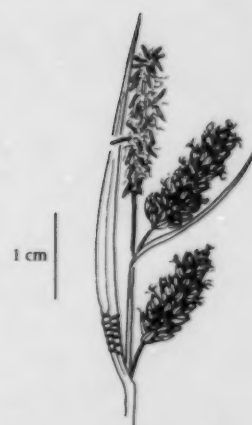
DESCRIPTION:

General: Perennial, tufted herb from short rhizomes; stems 20-80 cm tall, hairy, shorter than the leaves.

Leaves: Sheaths tight, hairy; ligules longer than wide; blades 2 or 3 per stem, soft-hairy, borne on the lower 1/3 of the stem, 2-3 mm wide, the lower ones reduced.

Flowers: Spikes 3 to 5, the terminal one linear, 8-15 mm long, with male flowers, rarely with female flowers above and male flowers below, the lower spikes 2 to 4, elliptical to cylindrical, 5-20 mm long, 1-2.5 mm wide, with female flowers, the upper nearly unstalked and approximate, the lower short-stalked and remote, erect to spreading; bracts subtending the female spikes leaflike, sheathless, longer than the inflorescence.

Fruits: Perigynia elliptical to cylindrical, 2.1-3 mm long, 1-1.5 mm wide, yellowish-green, smooth, obscurely many-nerved, nearly round, beakless; female scales egg-shaped, pointed to short-awned, about equalling the perigynia, pale green; stigmas 3; achenes 3-angled, 1.4-1.8 mm long.

*Carex pachystachya*KUE
Carex pallescens

Carex pansa Bailey (*C. arenicola* auct. pro parte, non Schmidt, *C. arenicola* Schmidt ssp. *pansa* [Bailey] Koyama & Calder)

sand-dune sedge

HABITAT/RANGE:

Sandy beaches, dunes and rocky shores in the lowland zone; rare on the Queen Charlotte Islands, Vancouver Island and Hornby Island; S to CA.

DESCRIPTION:

General: Perennial herb from long, creeping rhizomes; stems 5-30 cm tall, arising singly, longer than the leaves.

Leaves: Sheaths green, the lower ones bladeless, persisting, darkened; blades 3 to 5 per stem, crowded toward the base, flat or channeled at the base, the margins sometimes in-rolled and roughened, 1-3 mm wide.

Flowers: Spikes 6 to 15, clustered into an egg-shaped, 1.5- to 2.5-cm long head, indistinguishable, 1-1.2 cm long, unstalked, with both female and male flowers (rarely all female flowers), the few male flowers towards the tips; bracts of the spikes inconspicuous and much like the scales.

Fruits: Perigynia egg-shaped, 3-4.5 mm long, 1.5-2 mm wide, appressed to ascending, yellowish-brown or brownish-black, biconvex, smooth, few to several nerved below, short-stalked, the beaks bidentate, finely-toothed, about 1 mm long; female scales egg-shaped, as long as and slightly wider than the perigynia, awn-tipped, light to dark brown, the margins translucent; stigmas 2; achenes lens-shaped, smooth, 1.7-2 mm long.

Carex parryana Dewey

Parry's sedge

HABITAT/RANGE:

Moist, often alkaline, meadows and lakeshores in the steppe and montane zones; frequent in SC and SE BC; N to AK, YT and NT, E to ON and S to MN, ND, CO, UT and NV.

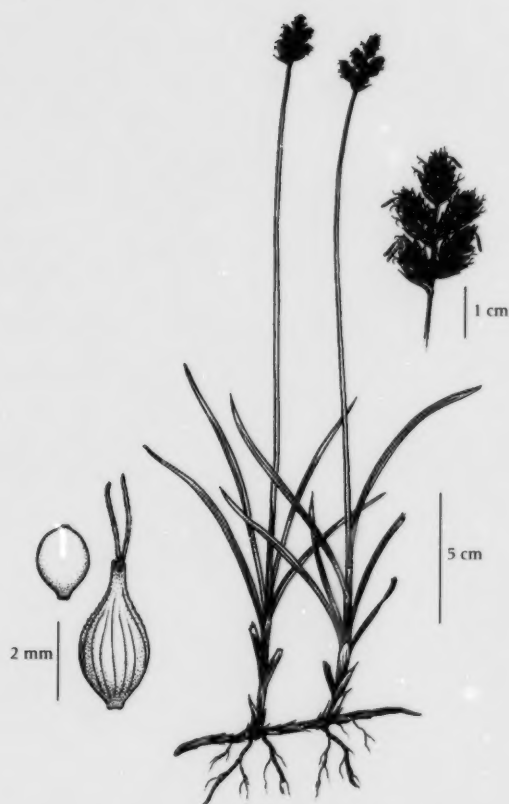
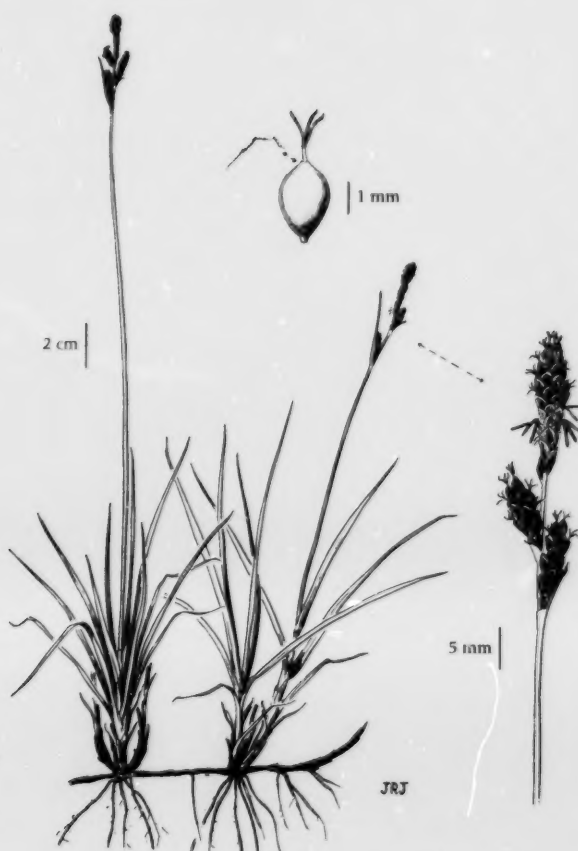
DESCRIPTION:

General: Perennial, loosely tufted herb from short creeping rhizomes; stems 10-40 cm tall, exceeding the leaves.

Leaves: Sheaths purplish-red towards the bases; blades flat, 2-6 mm wide, the lower ones not reduced.

Flowers: Terminal spike with male flowers, often with female flowers at the tip or throughout, the lower spikes 2 to 5, with female flowers, short-stalked, 0.6-2 cm long, erect; bracts subtending the spikes sheathless, bristlelike to scalelike, shorter than the inflorescence.

Fruits: Perigynia egg-shaped, 2-3 mm long, 1.2-1.8 mm wide, greenish-yellow to brown, marginally 2-ribbed, otherwise nerveless, the beaks obscure, less than 0.3 mm long; female scales lanceolate to egg-shaped, nearly as long as and as wide as the perigynia, pointed at the tips, sometimes extended into short awns, reddish-black, with green midribs and light brown margins; stigmas 3; achenes 3-angled, 1.2-1.5 mm long.

*Carex pansa**Carex parryana*

Carex pauciflora Lightf.
few-flowered sedge

HABITAT/RANGE:

Bogs and fens in the lowland, montane and subalpine zones; common along the coast and in EC BC, less frequent elsewhere; circumpolar, N to AK and YT, E to NF and S to ME, MA, WV, IN, WI, MN, and NW WA; Eurasia.

DESCRIPTION:

General: Perennial herb from slender rhizomes; stems solitary, arising singly or a few together, stiff, erect, 10-60 cm tall, longer than the leaves.

Leaves: Sheaths brownish, tight; blades 1 to 3, flat or channeled, 0.5-1.8 mm wide, smooth or sometimes with roughened margins, ascending, the tips long-pointed.

Flowers: Spikes solitary, 0.5-1.5 cm long, 0.5-1.2 mm wide, with both female and male flowers, the few erect male flowers towards the tips, the lower 1 to 6 flowers female; bractless.

Fruits: Perigynia few, narrowly lanceolate, 6-7.5 mm long, 1-1.5 mm wide, pale green, becoming brownish-green or straw-coloured, soon reflexed, nearly round in cross-section, membranaceous, smooth, finely-nerved, unstalked, the beaks not differentiated from the bodies; female scales lanceolate, short-awned, as wide as or slightly wider and shorter than the perigynia, brownish, early deciduous, with greener midstripes, the margins often translucent; stigmas 3; achenes 3-angled, 1.5-2.5 mm long.

Carex paysonis Clokey

Payson's sedge

HABITAT/RANGE:

Moist meadows and rocky slopes in the subalpine and alpine zones; rare in extreme S BC; E to SW AB and S to WY, UT, NV and E OR.

DESCRIPTION:

General: Perennial, tufted herb from short creeping rhizomes; stems 15-60 cm tall, exceeding the leaves.

Leaves: Sheaths purplish-red towards the bases; blades flat, 2-6 mm wide, the lower ones much reduced.

Flowers: Spikes 3 to 7, the terminal one with male flowers, the lower spikes 2 to 6, with female flowers, short-stalked, 0.6-2.5 cm long, erect to ascending, rarely nodding; bracts subtending the spikes sheathless, bristlelike to leaflike, about equalling the spikes.

Fruits: Perigynia broadly egg-shaped, 3.5-4 mm long, 1.8-2 mm wide, pale yellow to purple-black, nerveless, the beaks short, less than 0.5 mm long; female scales lanceolate, nearly as long as and narrower than the perigynia, pointed at the tips, reddish-black, with light brown margins; stigmas 3; achenes 3-angled, 1.5-1.7 mm long.

Carex peckii Howe (*C. nigromarginata* Schwein. var. *elliptica* [Boott] Gleason)

Peck's sedge

HABITAT/RANGE:

Dry to mesic open forests in the montane zone; locally frequent in E BC south of 57° N; E to PQ and NS and S to ME, MA, PA, IN, IA, NE and CO.

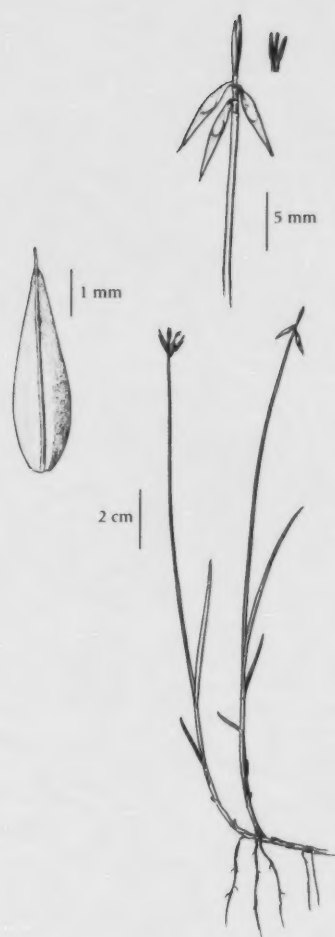
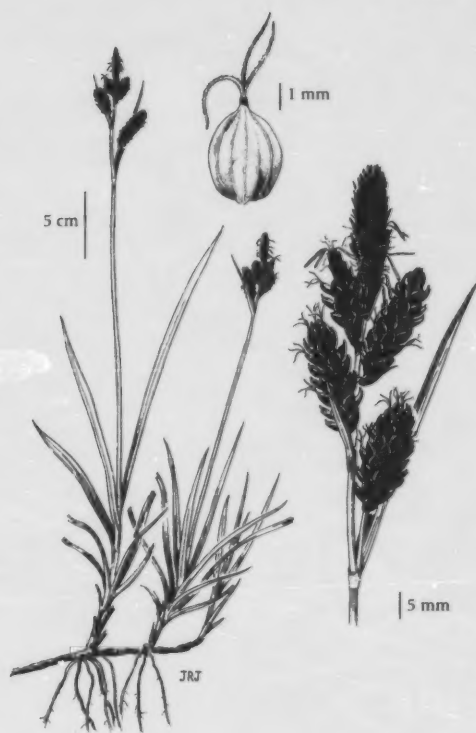
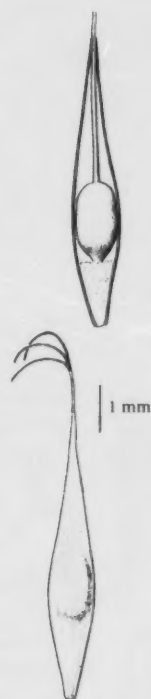
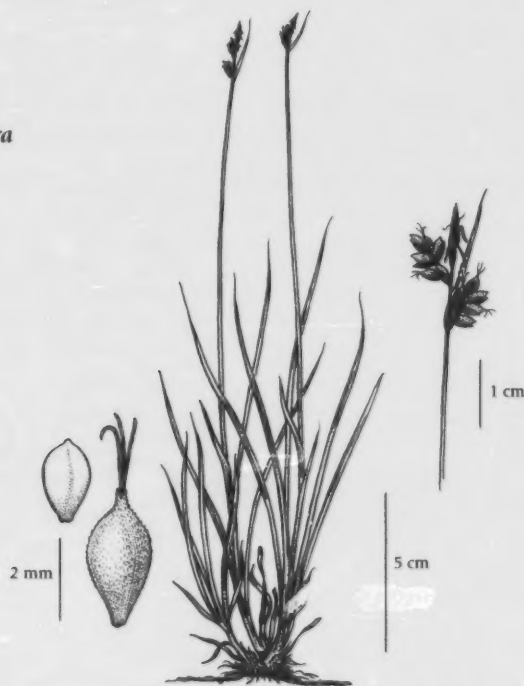
DESCRIPTION:

General: Perennial, loosely tufted herb from short, spreading rhizomes; stems 10-60 cm tall, clustered, much longer than the leaves, reddish-purple at the bases.

Leaves: Sheaths tight, persistent; blades flat, channeled towards the tips, smooth or somewhat rough, borne on the lower 1/3 of the stem, 1-1.5 mm wide, the lower ones slightly reduced.

Flowers: Spikes 3 or 4, the terminal one unstalked, 10-13 mm long, with male flowers, the lower spikes 2 or 3, few-flowered, with female flowers, unstalked, erect to spreading; bracts subtending the female spikes leaflike, sheathless, from shorter than to longer than the inflorescence, the upper bracts reduced.

Fruits: Perigynia elliptical to egg-shaped, 3-4 mm long, 1-1.5 mm wide, greyish or yellowish-green, convex, grey stiff-hairy, with 2 prominent marginal nerves, the bases short-stalked, the beaks short, 0.4-0.5 mm long, bidentate; female scales egg-shaped and pointed or sometimes short-awned, shorter than the perigynia, reddish-brown, with lighter midribs and translucent margins; stigmas 3; achenes 3-angled, smooth, 1.5-2 mm long.

*Carex pauciflora**Carex paysonis**Carex peckii*

Carex pedunculata Muhl. ex Willd.**peduncled sedge****HABITAT/RANGE:**

Mesic sites in the montane zone; rare in SE BC; E to NB and NF and S to ME, MA, SC, AL, IA and SD.

DESCRIPTION:

General: Perennial, tufted herb from short, stout rhizomes; stems 20-30 cm tall, from shorter than to slightly longer than the leaves.

Leaves: Sheaths pale green or bluish-green, the lower ones reduced, numerous, flat or channeled, the margins rolled-under, gradually tapering to the tips, 2-3 mm wide.

Flowers: Spikes 3 to 5, the terminal one lanceolate, 6-12 mm long, with male flowers and with a few female flowers at the bases, the lower spikes 2 to 4, shortly cylindrical, 6-12 mm long, short-stalked, with female flowers, erect (the lowermost 1 or 2 spikes sometimes rising from the bases on long stalks); bracts subtending the female spikes awnlike, 1 cm long or less.

Fruits: Perigynia broadly club-shaped, 3.5-4.5 mm long, 1.3-1.6 mm wide, pale greenish or straw-coloured, 3-angled, obscurely hairy, 2-keeled, nerveless, crowded, erect, long-stalked, beakless; female scales broadly egg-shaped, broadest at the tops, with short awns, purplish, with paler midribs, slightly shorter than the perigynia; stigmas 3; achenes 3-angled, 1.5 mm long.

Carex petasata Dewey (*C. liddonii* Boott)**pasture sedge; broad-wing sedge****HABITAT/RANGE:**

Dry to moist meadows, grassy slopes and open forests in the steppe and montane zones; common in SC BC, less frequent elsewhere E of the Coast-Cascade Mountains, the Queen Charlotte Islands and the adjacent mainland; N to SW YT, E to SW SK and S to NM, AZ and OR.

DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems 30-80 cm tall, well exceeding the leaves.

Leaves: Sheaths tight; blades flat, 2-3 mm wide, borne on the lower 1/3 of the stem.

Flowers: Spikes 4 to 6, aggregated into an elongated, 2-4 cm long head, unstalked, with both female and male flowers, the female ones towards the tips; bracts subtending the spikes sheathless, scalelike, the lowermost one occasionally prolonged.

Fruits: Perigynia lanceolate or narrowly egg-shaped, 6-8 mm long, 2-2.3 mm wide, light green to straw-coloured or brownish, more or less flattened, the margins winged nearly to the bases, the upper 1/2 fringed with teeth, many-nerved on both sides, with spongy bases, the beaks, 2-3 mm long, bidentate, broadly-margined, toothed below; female scales egg-shaped, brownish, with green centres, with translucent margins, somewhat shorter and narrower than the perigynia, short-awned; stigmas 2; achenes lens-shaped, 2.5-3 mm long.

Carex petricosa Dewey (*C. franklinii* Boott)**rock-dwelling sedge****HABITAT/RANGE:**

Dry gravelly, often calcareous slopes and rock outcrops in the alpine zone; rare in NE and SE BC; N to AK, YT and NT, E to SW AB and S to MT.

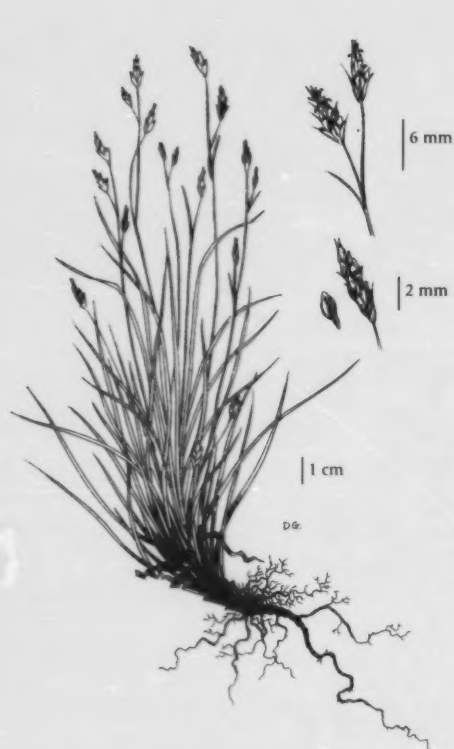
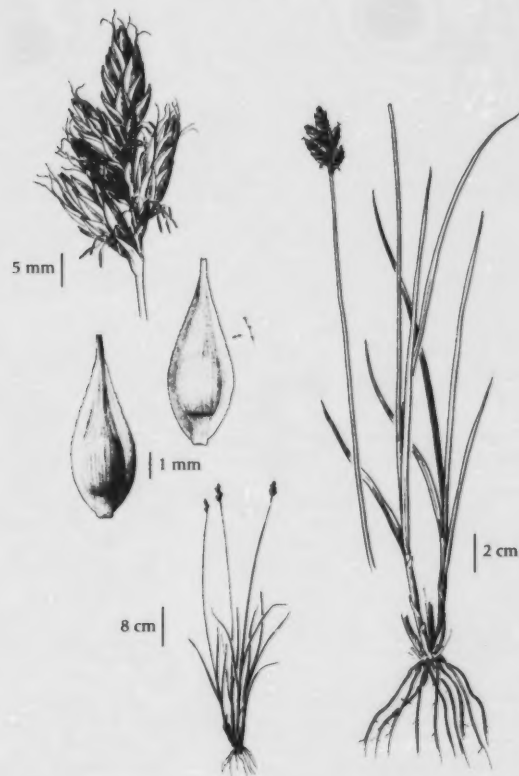
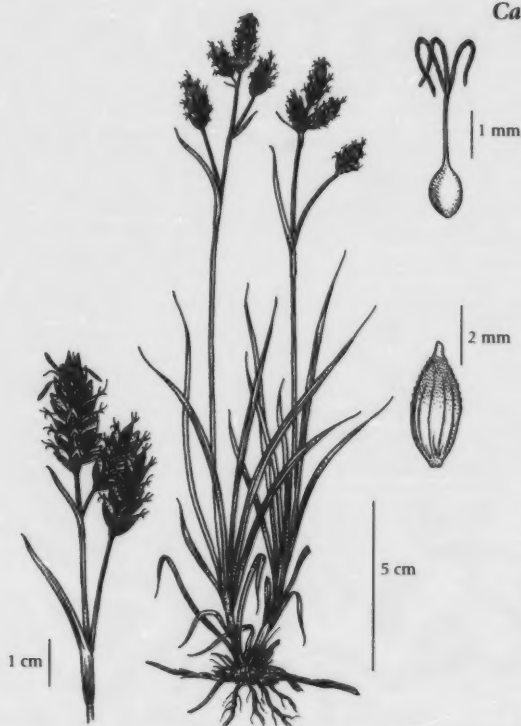
DESCRIPTION:

General: Perennial, densely tufted herb from short rhizomes; stems 10-60 cm tall, longer than the leaves.

Leaves: Sheaths tight; blades flat or channeled, 0.5-3 mm wide, the lower ones reduced.

Flowers: Spikes 4 to 7, the upper 1 to 3 with male flowers, sometimes with a few female flowers below, stalked, cylindrical, 2-4 cm long, the lower spikes 1 to 4, separate, erect to ascending or spreading, 2-4 cm long, with female flowers, or sometimes with male flowers towards the tips, the upper short-stalked, the lower long-stalked; bracts subtending the lowest spike long-sheathed, leaflike, 1.5-10 cm long, the blades much shorter than the inflorescence.

Fruits: Perigynia lanceolate to egg-shaped, 4-5 mm long, 1-2 mm wide, sparsely to moderately short-hairy or merely fringed marginally, obscurely nerved, the beaks short, rough; female scales egg-shaped, slightly shorter than the perigynia, rounded to pointed, dark brown, the centres paler, the margins translucent; stigmas 3; achenes 3-angled, 0.8-1.2 mm long.

*Carex pedunculata**Carex petasata**Carex petricosa*

***Carex phaeocephala* Piper**
dunhead sedge**HABITAT/RANGE:**

Mesic to dry meadows and rocky slopes in the subalpine and alpine zones; common in SC and SE BC, less frequent northward and on the SW coast, rare on S Vancouver Island, absent on the Queen Charlotte Islands and adjacent mainland; N to AK, YT and SW NT, E to SW AB and S to CO, UT, NV and CA.

DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems triangular, 10-30 cm tall, exceeding the leaves.

Leaves: Sheaths tight; blades folded, 1.5-2 mm wide, borne on the lower 1/3 of the stem.

Flowers: Spikes 3 to 6, aggregated into a rather compact head, 1-2.5 cm long, unstalked, with both female and male flowers, the female ones towards the tips; bracts subtending the spikes sheathless, reduced, inconspicuous.

Fruits: Perigynia egg-shaped, 4-6 mm long, 1.7-2.5 mm wide, straw-coloured to dark brown, the margins winged nearly to the bases, the upper 1/2 fringed with teeth, lightly several-nerved on the back, with faint nerves or nerveless below, the beaks obscurely bidentate, up to 1 mm long, narrowly margined and toothed below; female scales elliptical, pointed, brown, with narrow translucent margins and lighter centres, longer and wider than the perigynia; stigmas 2; achenes lens-shaped, 1.5 mm long.

***Carex pluriflora* Hult. (*C. rariflora* [Wahlenb.] Sm. ssp. *pluriflora* [Hult.] Egor., *C. stygia* auct. non Fries)**
many-flowered sedge**HABITAT/RANGE:**

Bogs, marshes, streambanks and wet meadows in the lowland and montane zones; common in coastal BC; amphiberian, N to AK and S to OR; coastal E Asia.

DESCRIPTION:

General: Perennial, loosely tufted herb from creeping rhizomes, the roots yellow-woolly; stems 10-60 cm tall, arising singly or a few together, equalling the leaves, reddish-tinged at the bases.

Leaves: Sheaths loose; blades 3 to 5 per stem, flat with slightly rolled-under margins, borne on the lower 1/2 of the stem, 2-4 mm wide, finely and densely white-pimples below, the lower ones much reduced.

Flowers: Spikes 2 to 4, the terminal one linear, 12-22 mm long, long-stalked, with male flowers, the lower spikes 1 to 3, with female flowers, cylindrical, 1-2 cm long, 6-8 mm wide, separate, long-stalked, nodding; bracts subtending the spikes greenish, membranaceous and whitish at the bases, the tips bristlelike, sheathless, shorter than the spikes, the upper ones reduced.

Fruits: Perigynia egg-shaped to narrowly egg-shaped, 3-4.4 mm long, 1.9-2.5 mm wide, pale to blackish-brown, 10- to 15-nerved, densely pimpled, short-stalked, beakless; female scales broadly egg-shaped, usually awn-tipped, narrower and longer than the perigynia, black to dark brown, the centres lighter, tending to wrap around the perigynia below; stigmas 3; achenes 3-angled, short-stalked, smooth, 1.7-2.5 mm long.

***Carex podocarpa* R. Br. (*C. behringensis* C.B. Clarke, *C. montanensis* Bailey)**
graceful mountain sedge**HABITAT/RANGE:**

Mesic to wet meadows, streambanks and seepage areas in the subalpine and alpine zones; frequent in N BC; amphiberian, N to AK, YT and NT, E to W AB and S to MT, ID and NE; E Asia.

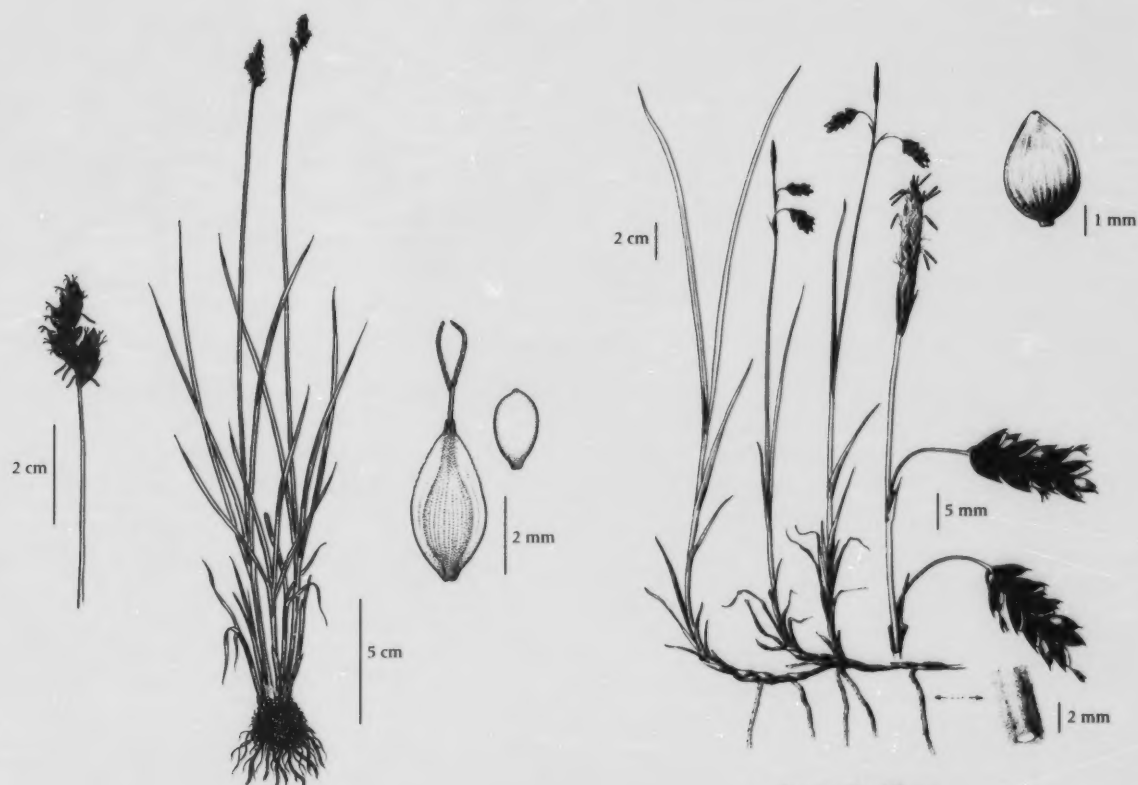
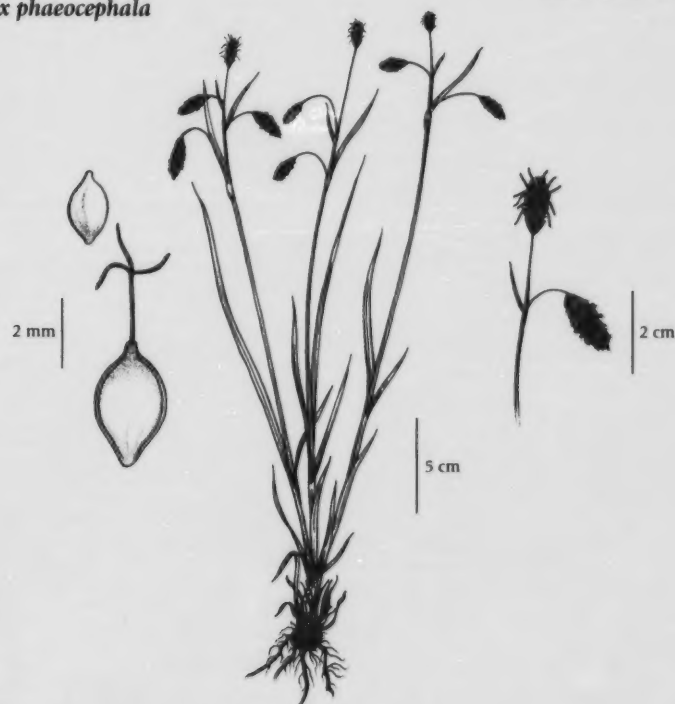
DESCRIPTION:

General: Perennial, tufted herb from short, stout rhizomes; stems 15-40 cm tall, exceeding the leaves.

Leaves: Sheaths purplish-red towards the bases; blades flat, 2-6 mm wide, the lower ones much reduced.

Flowers: Spikes 2 to 5, the terminal ones with male flowers, the lower spikes 1 to 4, with female flowers, 1-2 cm long, short-stalked, erect, except the lowermost often spreading; bracts subtending the spikes sheathless, bristlelike to leaflike, shorter to longer than the inflorescence.

Fruits: Perigynia egg-shaped, flattened, 3-3.5 mm long, 1.8-2 mm wide, reddish-brown to purple, nerveless, the beaks obscure, less than 0.5 mm long; female scales lanceolate, nearly as long and wide as the perigynia, pointed at the tips, reddish-black, with light brown margins; stigmas 3; achenes 3-angled, 1.2-1.5 mm long.

*Carex phaeocephala**Carex pluriflora**Carex podocarpa*

Carex praegracilis W. Boott

field sedge

HABITAT/RANGE:

Moist to wet, often alkaline, meadows in the steppe and montane zones; common in SC and SE BC east of the Coast-Cascade Mountains, rare northward; N to AK and SW YT, E to S PQ and S to MA, PA, VA, KY, MO, OK, NM, AZ and CA.

DESCRIPTION:

General: Perennial herb from stout, creeping, dark rhizomes; stems 30-75 cm tall, arising singly or a few together, longer than the leaves.

Leaves: Sheaths green, the lower ones bladeless, persisting, darkened; blades 2 to 5 per stem, crowded toward the base, flat or nearly so, 1-3 mm wide.

Flowers: Spikes 6 to 15, clustered into a cylindrical or egg-shaped, 1- to 5-cm long head, the spikes 0.7-1 cm long, short-stalked, with both female and male flowers (sometimes with nearly all male flowers or nearly all female flowers), the male flowers towards the tips; bracts 1 to 3, up to 3 cm long, like the scales.

Fruits: Perigynia egg-shaped to narrowly egg-shaped, 3-4 mm long, 1.3-1.5 mm wide, appressed-ascending, light to dark brown, biconvex, smooth, few- to several-nerved below, short-stalked, the beaks bidentate, finely-toothed, 0.6-1.3 mm long; female scales egg-shaped, as long as and slightly wider than the perigynia, awn-tipped, straw-coloured to light brown or rarely dark brown, the midribs pale, the margins translucent; stigmas 2; achenes lens-shaped, smooth, 1.2-1.7 mm long.

Carex prairea Dewey ex A.W. Wood

prairie sedge

HABITAT/RANGE:

Fens and wet meadows in the montane zone; locally frequent in SC and C BC; E to PQ and NS and S to MA, PA, VA, IN, IL, IA, NE, WY and ID.

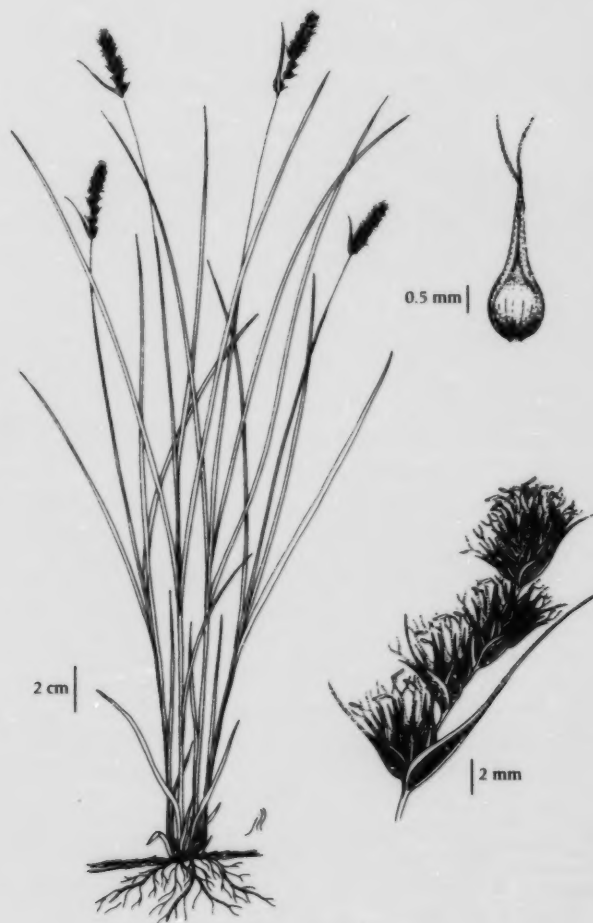
DESCRIPTION:

General: Perennial, tufted herb from short, slender rhizomes; stems 30-100 cm tall, roughened on the angles, longer than the leaves.

Leaves: Sheaths coppery-coloured at the tips, conspicuously red-dotted, with glandular projections on the side nearest the stem, the blades of the lower leaves large, firm, persistent; blades 3 to 4 per stem, mostly from near the bases, 1-2.5 (3) mm wide, flat, the margins rolled-under.

Flowers: Spikes numerous in a narrow, interrupted, 4- to 8-cm long head, cylindrical to egg-shaped, few-flowered, 3-6 mm long, 2.5-4 mm wide, erect or mostly ascending, usually with both female and male flowers, the male flowers towards the tips, at least in the terminal one; bracts inconspicuous, often similar to the female scales, the lowest one often prolonged into an awn.

Fruits: Perigynia broadly lanceolate, 2.5-3 mm long, 0.7-1.2 mm wide, straw-coloured to brownish, biconvex, smooth, faintly nerved, sharp-edged, short-stalked, finely toothed above, the beaks nearly as long as the bodies, entire; female scales egg-shaped, as long and wide as the perigynia, pointed, light reddish-brown, the centres lighter, the margins translucent; stigmas 2; achenes lens-shaped, 1.2-1.4 mm long.

*Carex praegracilis**Carex prairea*

Carex praticola* Rydb.*meadow sedge****HABITAT/RANGE:**

Moist to wet meadows, grassy slopes, swamps, streambanks and forests in the lowland, steppe and montane zones; common throughout BC except absent on the Queen Charlotte Islands; N to AK, YT and NT, E to NF and S to MI, IL, MN, NM, UT, ID and CA.

DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems triangular, 20-70 cm tall, exceeding the leaves.

Leaves: Sheaths tight; blades flat, 1.5-3 mm wide, borne on the lower 1/3 of the stem.

Flowers: Spikes 3 to 7, aggregated into a loose, cylindrical to elliptical head, 1-5 cm long, unstalked, with both female and male flowers, the female ones towards the tips; bracts subtending the spikes sheathless, reduced, inconspicuous, the lowermost sometimes awnlike.

Fruits: Perigynia narrowly egg-shaped, 4.5-6.5 mm long, 1.7-2.5 mm wide, straw-coloured to dark brown, the margins winged nearly to the bases, the upper 1/2 fringed with teeth, lightly several-nerved on the backs, with faint nerves or nerveless below, the beaks shallowly bidentate, up to 1 mm long, narrowly margined and toothed below; female scales elliptical, pointed, yellowish-brown, with broad translucent margins and lighter centres, longer and wider than the perigynia; stigmas 2; achenes lens-shaped, 1.5-2 mm long.

Carex preslii* Steud.*Presl's sedge; Elvis' sedge****HABITAT/RANGE:**

Mesic to moist grassy slopes in the subalpine zone; infrequent in S BC; E to AB and S to WY, ID, NV and CA.

DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems 20-70 cm tall, exceeding the leaves.

Leaves: Sheaths tight; blades flat, 1.5-4 mm wide, borne on the lower 1/3 of the stem.

Flowers: Spikes 3 to 8, aggregated into a 1- to 2-cm long head, unstalked, with both female and male flowers, the female ones towards the tips; bracts subtending the spikes sheathless, reduced, inconspicuous.

Fruits: Perigynia egg-shaped, 3-3.5 mm long, 1.3-2 mm wide, deep green to yellowish-brown, flattened on the lower sides, bulging at the back, the margins narrowly winged nearly to the bases, the upper 1/2 fringed with teeth, several-nerved on the back, nerveless below, the beaks obliquely cut, 1-1.5 mm long, narrowly margined and toothed below; female scales triangular, reddish-brown, with narrow translucent margins and green midribs, somewhat shorter and narrower than the perigynia; stigmas 2; achenes lens-shaped, 1.5 mm long, nearly filling the bodies of the perigynia.

Carex pyrenaica* Wahlenb. ssp. *micropoda* (C.A. Mey.) Hult. (*C. micropoda* C.A. Mey.)*Pyrenean sedge****HABITAT/RANGE:**

Mesic to moist meadows and rocky slopes in the subalpine and alpine zones; frequent throughout BC except rare on the Queen Charlotte Islands and absent in NE BC; amphiberian, N to AK, YT and NT, E to SW AB and S to CO, UT, NV and CA; E Asia.

DESCRIPTION:

General: Perennial, loosely tufted herb from fibrous roots; stems 5-30 cm tall, equalling or longer than the leaves.

Leaves: Sheaths tight, bladeless below; blades 2 to 4 per stem, deeply channeled, borne on the lower 1/4 of the stem, 0.5-1.5 mm wide.

Flowers: Spikes solitary, cylindrical to narrowly cylindrical, 5-20 mm long, erect, with both female and male flowers, the few, inconspicuous male flowers towards the tips; bractless.

Fruits: Perigynia narrowly egg-shaped, 3-4.5 mm long, 0.7-1.5 mm wide, appressed at first, spreading at maturity, smooth, nerveless, long-stalked, the beaks short, bidentate; female scales egg-shaped, shorter and wider than the perigynia, round-tipped, dark brown, the centres pale, the margins translucent; stigmas 2, rarely 3; achenes flat or 3-angled, about 1.2-1.5 mm long.

*Carex praticola**Carex preslii**Carex pyrenaica* ssp. *micropoda*

Carex raynoldsii Dewey

Raynolds' sedge

HABITAT/RANGE:

Moist to dry meadows and open forests in the steppe to subalpine zones; infrequent in S BC in and east of the Coast-Cascade Mountains; E to SW SK and S to CO, UT, NV, and CA.

DESCRIPTION:

General: Perennial, tufted herb from short, stout rhizomes; stems 15-60 cm tall, exceeding the leaves.

Leaves: Sheaths purplish-red towards the bases; blades flat, 3-8 mm wide, the lower ones fully developed.

Flowers: Spikes 3 to 6, the terminal one with male flowers, the lower spikes 2 to 5, mostly remote, with female flowers, 0.6-2.5 cm long, short-stalked, erect; bracts subtending the spikes without sheaths, the lowermost leaflike, about equalling or longer than the inflorescence.

Fruits: Perigynia egg-shaped, 3.5-4.5 mm long, 1.8-2 mm wide, plump, yellowish-green to yellowish-brown, marginally 2-ribbed, several-nerved, the beaks obscure, less than 0.4 mm long; female scales lanceolate, nearly as long as and narrower than the perigynia, pointed at the tips, brown to black, with light brown margins; stigmas 3; achenes 3-angled, 2.2-2.5 mm long.

Carex retrorsa Schwein.

long-bracted sedge; retrorse sedge

HABITAT/RANGE:

Marshes, fens, swamps, shorelines, streambanks and wet meadows in the lowland, steppe and montane zones; frequent in S BC east of the Coast-Cascade Mountains and south of 56° N, rare in SW BC; N to NT, E to NF and S to ME, MA, PA, OH, IN, IL, IA, SD, CO, UT, NV and OR.

DESCRIPTION:

General: Perennial, tufted herb from short-creeping rhizomes; stems 15-100 cm tall, triangular, smooth, shorter than the leaves.

Leaves: Sheaths tight; ligules longer than wide; blades 4 to 8 per stem, flat, with whitish cross-walls, borne on the lower 1/2 of the stem, 3-10 mm wide, flat, the lower ones reduced, persistent.

Flowers: Spikes 4 to 7, the terminal 2 or 3 linear, 1.5-5 cm long, long-stalked, with many male flowers, the lower 2 to 4 spikes cylindrical, 2.5-7.5 cm long, with female flowers, or some with male flowers above the female flowers, short-stalked, usually clustered together; bracts subtending the lowest spikes leaflike, sheathless, much longer than the inflorescence.

Fruits: Perigynia elliptical, mostly reflexed, 7-10 mm long, 1.7-3 mm wide, yellowish-green to reddish-brown, somewhat inflated, smooth, shiny, strongly nerved, contracted into long beaks, the beaks 2-3.5 mm long, bidentate, with straight teeth; female scales lanceolate to egg-shaped, pointed, much narrower and shorter than the perigynia, yellowish- to reddish-brown, with 3-nerved, lighter greenish centres and narrow, translucent margins; stigmas 3; achenes 3-angled, 1.7-2.1 mm long.

Carex richardsonii R. Br.

Richardson's sedge

HABITAT/RANGE:

Dry rocky slopes and forests in the montane zone; common in C and SC BC (Cariboo region); E to PQ and S to VT, PA, OH, IN, IL, IO, SD and WY.

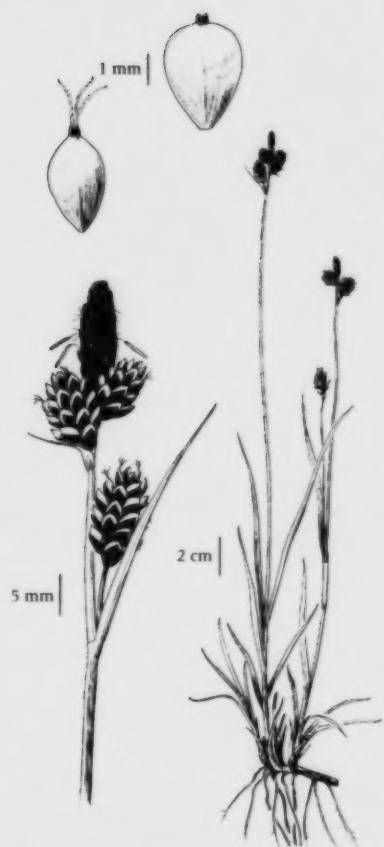
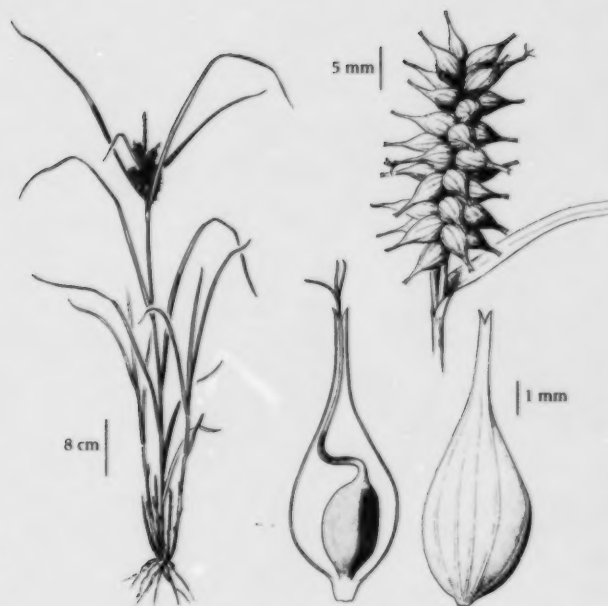
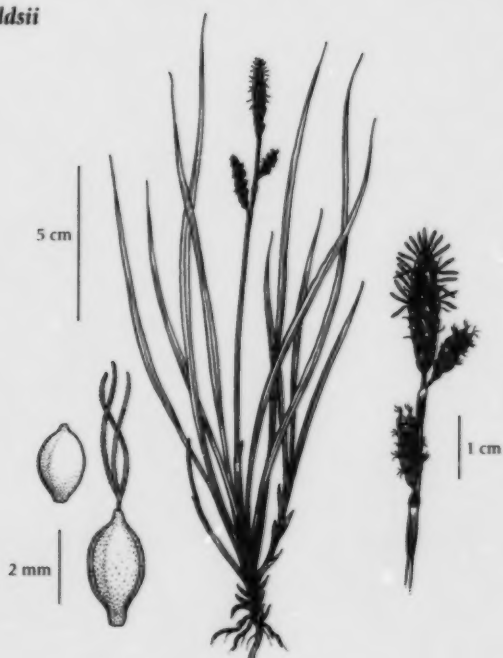
DESCRIPTION:

General: Perennial, loosely tufted herb from long rhizomes; stems 10-25 cm tall, rough above, about equalling the leaves.

Leaves: Sheaths brownish, the lower ones bladeless and breaking into threads; blades 6 to 9 per stem, mostly basal, flat or somewhat channeled, gradually tapering to the tips, 2-2.5 mm wide.

Flowers: Spikes 2 to 4, the terminal one stalked, linear, 12-20 mm long, with male flowers, the lower spikes 1 to 3, linear, 10-20 mm long, the female flowers short-stalked, erect; bracts subtending the female spikes reduced to bladeless sheaths, up to 1 cm long.

Fruits: Perigynia egg-shaped, 2.5-3.5 mm long, 1-1.5 mm wide, straw-coloured or brownish, obscurely 3-angled, appressed short-hairy, crowded, erect, short-stalked, the beaks bidentate, about 0.5 mm long or less; female scales broadly egg-shaped, dark purplish, with translucent margins, longer than the perigynia; stigmas 3; achenes 3-angled, 1.7-2 mm long.

*Carex raynoldsii**Carex retrorsa**Carex richardsonii*

Carex rossii Boott (*C. brevipes* W. Boott, *C. deflexa* Hornem. var. *rossii* [Boott] Bailey)**Ross' sedge****HABITAT/RANGE:**

Dry to mesic open forests, rock outcrops and forest openings in all vegetation zones; common throughout BC except absent on the Queen Charlotte Islands; N to AK and YT, E to ON, and S to MI, NE, NM, AZ and CA.

DESCRIPTION:

General: Perennial, densely tufted herb from short rhizomes; stems 5-30 (40) cm tall, densely clustered, longer than or sometimes equalling the leaves, purple-tinged at the bases.

Leaves: Sheaths tight, persistent; blades flat, channeled above, smooth or somewhat rough, borne on the lower 1/4 of the stem, 1-4 mm wide, the lower ones slightly reduced.

Flowers: Spikes 4 to 10, the terminal one unstalked or short-stalked, 5-15 mm long, with male flowers, the lower spikes 3 to 9, few-flowered, with female flowers, unstalked to short-stalked, 1 to 4 of these borne near the male spike and 1 or more borne near the bases of the stem, erect; bracts subtending the female spikes leaflike, sheathless or short-sheathing, from shorter than to 4 times as long as the male spike, the upper bracts reduced.

Fruits: Perigynia elliptical to nearly globe-shaped, 3-4 mm long, 2.6-3 mm wide, green to straw-coloured, convex, finely short-hairy, with 2 prominent marginal nerves, the bases long-stalked, the beaks short and inconspicuous to slender and 0.4-1.8 mm long, shallowly bidentate; female scales egg-shaped and pointed on the upper perigynia to broadly lanceolate and awned on the lower perigynia, usually shorter and somewhat wider than the perigynia, brownish-green, with lighter midribs and translucent margins; stigmas 3, rarely 2; achenes 3-angled, smooth, 1.5-2 mm long.

Notes: Part of the poorly studied *C. deflexa* complex.

Carex rostrata Stokes**swollen beaked sedge****HABITAT/RANGE:**

Peat bogs in the montane and subalpine zones, rare in BC east of the Coast-Cascade Mountains; circumpolar, N to AK, YT and NT, E to NF and S to MI, IL, MN, MT, ID and WA; Greenland, Iceland, Eurasia.

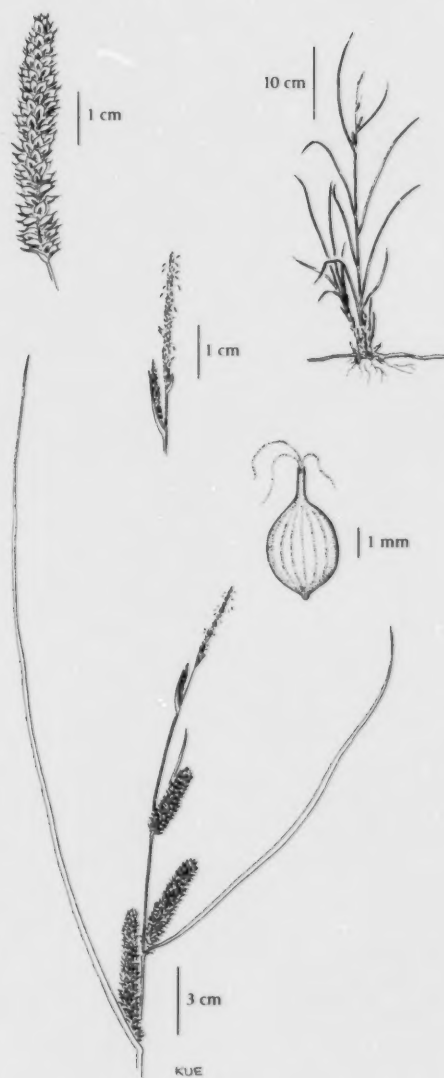
DESCRIPTION:

General: Perennial, tufted herb from short-creeping rhizomes; stems 30-70 cm tall, triangular, smooth, except slightly rough below the inflorescence, slightly longer than the leaves.

Leaves: Sheaths tight; ligules as long as wide; blades 4 to 8 per stem, borne on the lower 1/2 of the stem, 1.2-4.5 mm wide, folded or channeled, with silica papillae on the upper surface, cross-walled; lower leaves reduced, persistent.

Flowers: Spikes 3 to 6 (8), the terminal 1 or 2, sometimes 3 or 4, linear, 1.5-5 cm long, long-stalked, with many male flowers, the lower 2 to 4 spikes cylindrical, 3-6.5 cm long, with female flowers, short-stalked, the lowermost ones spreading; bracts subtending the lowest spike leaflike, sheathless, the lowest one longer than the inflorescence.

Fruits: Perigynia egg-shaped, 5-9 mm long, 1.7-3 mm wide, yellowish-green to reddish-brown, somewhat inflated, smooth, shiny, strongly nerved, rather abruptly contracted into beaks, the beaks 1.5-2 mm long, bidentate, with straight teeth; female scales lanceolate to egg-shaped, pointed, rarely awned, narrower and shorter than the perigynia, yellowish- to chestnut-brown, with lighter centres and narrow, translucent margins; stigmas 3; achenes 3-angled, 2.5-3 mm long.

*Carex rossii**Carex rostrata*

***Carex rupestris* All.**

curly sedge; rock sedge

HABITAT/RANGE:

Dry rocky slopes, scree slopes and meadows in the alpine zone; rare in N and C BC (ssp. *rupestris*) and rare in SE BC (ssp. *drummondiana*); ssp. *rupestris* – circumpolar, N to AK, YT and NT, and E to NF; Greenland, Iceland, Eurasia; ssp. *drummondiana* – E to SW AB and S to SD, NM and UT.

DESCRIPTION:

General: Perennial, tufted herb from long, creeping rhizomes; stems 4-12 cm tall, arising singly or a few together, longer or shorter than the leaves.

Leaves: Sheaths tight, translucent below; ligules slightly wider than long; blades 8 to 12 per stem, flat or folded, borne on the lower 1/2 of the stem, soon drying, 1-3 mm wide, the tips often curled.

Flowers: Spikes solitary, linear to cylindrical, 10-20 mm long, 3-4.5 mm wide, erect, with both female and male flowers, the male flowers towards the tips, the female flowers below; bractless.

Fruits: Perigynia egg-shaped, 3-4 mm long, 1.5-1.7 mm wide, brown to straw-coloured, 2-keeled, finely many-nerved, unstalked or nearly so, the beaks short, about 0.2 mm long, bidentate; female scales broadly egg-shaped, shorter than or slightly larger than the perigynia, round or pointed, dark brown, the centres lighter, the margins white-translucent; stigmas 3; achenes sharply 3-angled, 2-2.5 mm long.

Notes: Two subspecies occur in BC:

1. Female scales slightly larger than and usually concealing the perigynia; leaves 2-3 mm wide ssp. *drummondiana* (Dewey) Holub
1. Female scales shorter than perigynia; leaves about 1.5 mm wide ssp. *rupestris*

Carex sartwellii* Dewey var. *sartwellii

Sartwell's sedge

HABITAT/RANGE:

Marshes, fens, wet (often alkaline) meadows and moist open forests in the steppe and montane zones; infrequent in SC and SE BC; N to NT, E to PQ and S to NY, OH, IN, IL, MO, KS, CO and WA.

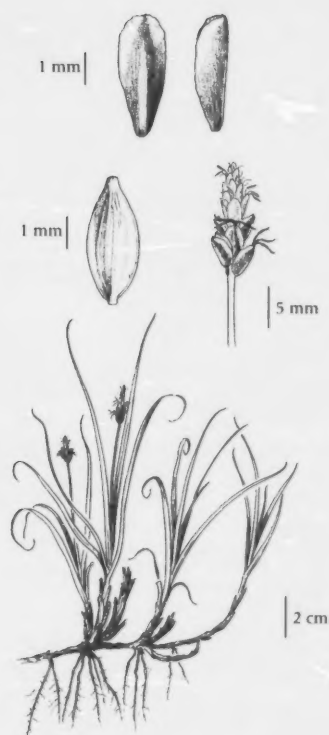
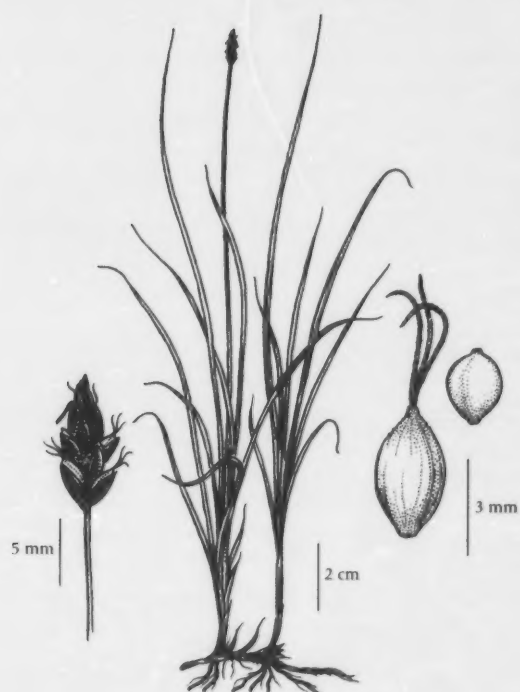
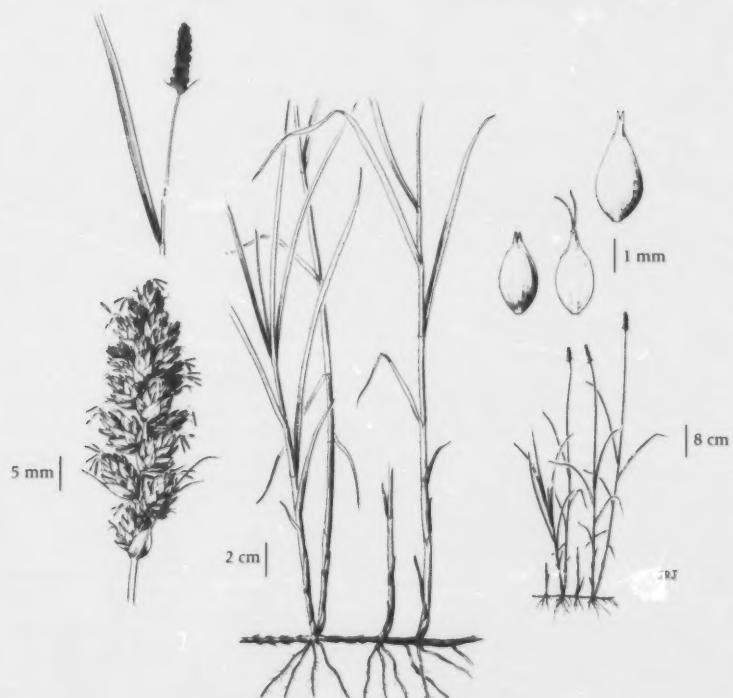
DESCRIPTION:

General: Perennial herb from stout, creeping, scaly, fibre-covered rhizomes; stems 30-80 cm tall, arising singly or a few together, longer than the leaves.

Leaves: Sheaths tight, green-lined on the outside towards the bases; blades 2 to 4 per stem, widely separated, 2.5-5 mm wide, the lower ones reduced to scales.

Flowers: Spikes 20 or more, densely aggregated into a more or less cylindrical, 2- to 5-cm long head, the spikes only distinguishable below, broadly egg-shaped, 6-9 mm long, unstalked, with both female and male flowers, the male flowers towards the tips; bracts broadly egg-shaped, translucent, the lowest ones with prolonged tips, sometimes as long as the inflorescence.

Fruits: Perigynia, broadly lanceolate to egg-shaped, 2.3-4 mm long, 1.5-1.9 mm wide, plano-convex, appressed, straw-coloured or light brown, smooth, finely several-nerved, finely-toothed, the beaks short, dorsally cleft, about 1/4 the length of the bodies or less; female scales broadly egg-shaped, slightly shorter and narrower than the perigynia, pointed, reddish-brown, the midribs green, the margins translucent; stigmas 2; achenes lens-shaped, smooth, 1.2-2 mm long.

*Carex rupestris* ssp. *drummondiana**Carex rupestris* ssp. *rupestris**Carex sartwellii* var. *sartwellii*

Carex saxatilis* L. ssp. *laxa* (Trautv.) Kalela (*C. physocarpa* Presl)*russet sedge****HABITAT/RANGE:**

Bogs, fens, shorelines and wet meadows in the montane and subalpine zones; frequent throughout BC; circumpolar, N to AK, YT and NT, E to AB and S to MA, CO, UT and WA; N Eurasia.

DESCRIPTION:

General: Perennial herb from short-creeping rhizomes; stems 10-90 cm tall, arising singly, triangular, rough below the inflorescence, longer than the leaves.

Leaves: Sheaths tight; ligules as long as wide; blades 4 to 8 per stem, flat, the margins rolled-under, borne on the lower 1/2 of the stem, 2-12 mm wide, the lower ones reduced, persistent.

Flowers: Spikes 4 to 7, the terminal 1 to 3 linear, 1.5-5 cm long, long-stalked, with many male flowers, the lower 1 to 4 spikes cylindrical, 1.5-5 cm long, with female flowers, or some with male flowers above the female flowers, short-stalked, erect to spreading or nodding; bracts subtending the lowest spike leaflike, sheathless or short-sheathing, the lowest longer than the inflorescence.

Fruits: Perigynia elliptical to broadly egg-shaped, 3.5-5 mm long, 1-1.2 mm wide, yellowish-green or brown to purplish-black, somewhat inflated, smooth, shiny, 2-ribbed, the bases round, short-stalked, the beaks short, 0.1-0.3 mm long, entire or nearly so; female scales lanceolate to egg-shaped, long-pointed or awned, narrower and exceeding the perigynia, purplish-brown, with 3-nerved, lighter centres and narrow, translucent margins; stigmas 2; achenes lens-shaped, minutely pimpled, 1.9-2.4 mm long.

Carex saximontana* Mack. (*C. backii* Boott var. *saximontana* [Mack.] Boivin)*Rocky Mountain sedge****HABITAT/RANGE:**

Moist to dry meadows, shaded rocky slopes in the montane or subalpine zones; infrequent in BC east of the Coast-Cascade Mountains and S of 55° N; E to MB and S to IA, NE, CO, UT, NV and OR.

DESCRIPTION:

General: Perennial, tufted herb from short, blackish, fibrous roots; stems 5-35 cm tall, varying in length, densely clustered, usually shorter than the leaves, narrowly winged and roughened on the angles, enlarged below the spikes.

Leaves: Sheaths tight, translucent below; blades 2 to 4 per stem, glaucous-green, with the margins rolled-under, minutely pimpled, borne on the lower 1/4 of the stem, 3-5 mm wide, the lower ones reduced.

Flowers: Spikes 1 to 3, widely separated, from terminal to near basal, 10-15 mm long, with both male and female flowers, the male flowers towards the tips, few, unstalked, inconspicuous, about 2 mm long, the lower flowers female, 2 to 5, unstalked to short-stalked, erect; subtending the female spikes leaflike, sheathless or short-sheathing, from shorter than to 6-10 times as long as the spikes, the upper bracts reduced.

Fruits: Perigynia broadly egg-shaped, 4-5 mm long, 1.5-2 mm wide, green or greenish, inflated, smooth, nerveless, stalked, the beaks bidentate, conic, slightly fine-toothed, about 0.5-1 mm long; female scales greenish, leaflike, 0.5-2 cm long, 4-5 mm wide when flat, folded and keeled, more or less covering the perigynia, long-pointed, the lowermost the longest; stigmas 3; achenes 3-angled, yellowish-green to blackish, granular, 2.5-3 mm long.

*Carex saxatilis* ssp. *laxa**Carex saximontana*

Carex scirpoidea Michx. (*C. pseudoscirpoidea* Rydb. = var. *pseudoscirpoidea*, *C. stenochlaena* [Holm] Mack. = var. *stenochlaena*, *C. scirpiformis* Mack. = var. *scirpoidea*)

single-spike sedge

HABITAT/RANGE:

Moist meadows and streambanks (var. *stenochlaena*) or mesic to dry meadows and open rocky slopes (var. *pseudoscirpoidea* and var. *scirpoidea*) from the montane to alpine zones; var. *pseudoscirpoidea* – locally frequent in the Cascade Mountains, rare elsewhere in SC BC; var. *scirpoidea* – frequent in N and SE BC; var. *stenochlaena* – frequent in W BC, less frequent eastward; var. *pseudoscirpoidea* – S to CO, UT and CA; var. *scirpoidea* – amphiberingian, N to AK, YT and NT, E to NF and S to NH, MI, CO and WA; Greenland, E Asia; var. *stenochlaena* – N to AK and YT and S to MT, ID and E OR.

DESCRIPTION:

General: Perennial herb from stout, creeping rhizomes; stems 10-60 cm tall, arising singly or a few together, equalling or longer than the leaves.

Leaves: Sheaths tight, hairy below; ligules short; blades 2 to 4 per stem, flat or somewhat channeled, borne on the lower 1/3 to 1/2 of the stem, 1-3 mm wide.

Flowers: Spikes solitary, either male or female on separate plants, the male spikes cylindrical, erect, the female spikes many-flowered, similar, 1.5-4 cm long, 2.5-5 mm wide, unstalked; bracts scalelike, prolonged into awns up to 2 cm long or sometimes awnless.

Fruits: Perigynia egg-shaped to elliptical or nearly globe-shaped, 2.5-4.5 mm long, 1-2 mm wide, appressed, slightly spreading at maturity, straw-coloured, short-hairy on the backs, especially towards the tips, obscurely several-nerved, unstalked to short-stalked, the beaks bidentate, evident, short, slender; female scales broadly egg-shaped, slightly shorter and as wide as the perigynia, rounded, brown to blackish, the centres pale, the margins narrowly translucent; stigmas 3; achenes 3-angled, about 1.5-2 mm long.

Notes: Three varieties occur in BC:

1. Perigynia egg-shaped to elliptical, mostly 3-4.5 mm long and more than 2.5 times as long as wide; achenes distinctly stalked; plants of moist sites mainly of W BC var. *stenochlaena* Holm
1. Perigynia nearly globe-shaped, mostly 2.5-3 mm long and less than 2.5 times as long as wide; achenes short-stalked or unstalked; plants of mesic to dry sites in SC BC or N and SE BC.
 2. Stems with the lowest leaves reduced to scales, the flowering ones arising from the current year's vegetative shoots which have conspicuous basal scale leaves; plants mainly of N and SE BC var. *scirpoidea*
 2. Stems with the lowest leaves well developed, clothed at bases with the conspicuous dried-up leaves of the previous year; plants mainly in the Cascades var. *pseudoscirpoidea* (Rydb.) Cronq.

***Carex scoparia* Schkuhr ex Willd.**

pointed broom sedge

HABITAT/RANGE:

Moist to wet ditches, lakeshores, marshes and meadows in the lowland and montane zones; rare in S and EC BC; E to NF and S to ME, MA, NC, GA, AL, MS, LA, OK, NM, AZ and CA.

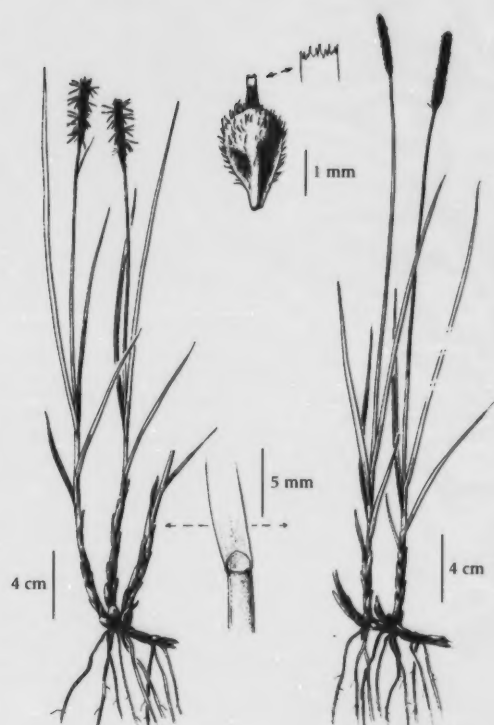
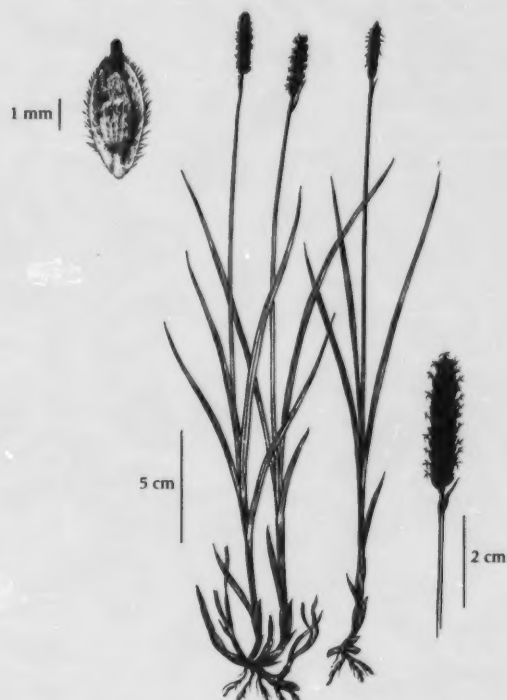
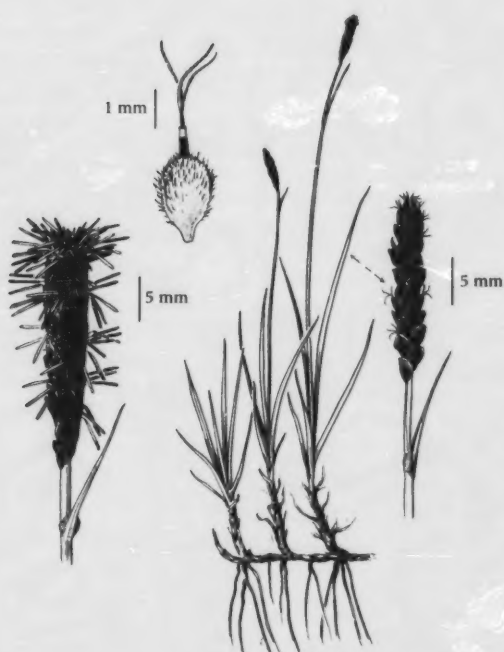
DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems 15-90 cm tall, exceeding the leaves.

Leaves: Sheaths tight; blades flat, 1.5-3 mm wide, borne on the lower 1/3 of the stem.

Flowers: Spikes 4 to 12, aggregated into a 1-5 cm long ellipsoid head, unstalked, with both female and male flowers, the female flowers towards the tips; bracts subtending the spikes sheathless, reduced, the lowermost sometimes awnlike, about 0.5-1.5 cm long.

Fruits: Perigynia narrowly egg-shaped, 4-6.5 mm long, 1.2-2 mm wide, greenish-white or straw-coloured, more or less flattened, the margins narrowly winged to the bases, the upper 2/3 fringed with teeth, lightly several-nerved on both sides or nerveless below, the beaks obliquely cut on the upper surface, minutely bidentate, 1.2-2 mm long, narrowly margined and toothed below; female scales narrowly elliptical, greenish-white, with translucent margins, shorter and narrower than the perigynia; stigmas 2; achenes lens-shaped, 1.1-1.5 mm long.

*Carex scirpoidea* var. *scirpoidea**Carex scirpoidea* var. *stenochlaena**Carex scirpoidea* var. *pseudoscirpoidea**Carex scoparia*

Carex scopulorum Holm var. *bracteosa* (Bailey) F.J. Herm. (*C. campylocarpa* Holm, *C. gymnoclada* Holm)
Holm's Rocky Mountain sedge

HABITAT/RANGE:

Shorelines, streambanks and wet to moist meadows in the montane to alpine zones; rare in SC BC; E to SW AB and S to CO, AZ and CA.

DESCRIPTION:

General: Perennial, clumped herb from short rhizomes; stems triangular with rough edges, 10-65 cm tall, exceeding the leaves.

Leaves: Sheaths tight, short; blades flat, well distributed along the stem, 3-6 mm wide, the lower ones reduced.

Flowers: Spikes 3 or 4, the terminal spike with male flowers, the lower spikes 2 or 3, with female flowers (sometimes with male flowers at the tips), unstalked or with short stalks, 0.5-2.5 cm long, erect; lowermost bract subtending the spikes scalelike, sheathless, with black ear-shaped lobes, the upper ones reduced.

Fruits: Perigynia broadly egg-shaped, 2-4 mm long, 1.2-2.3 mm wide, brownish-green, 3-angled, the angles rounded, smooth to somewhat wrinkled, beakless; female scales egg-shaped, shorter or longer than the perigynia, brownish-red to purplish-black, with lighter 3-nerved centres and translucent margins; stigmas 2; achenes lens-shaped, 1.2-1.7 mm long.

Carex siccata Dewey (*C. foenea* Willd.)

hay sedge; silvertop sedge

HABITAT/RANGE:

Dry, often sandy sites in the steppe and montane zones; frequent in BC east of the Coast-Cascade Mountains except rare in NW BC; N to S YT and NT, E to S PQ and S to MA, NC, TN, IA, SD, NM and AZ.

DESCRIPTION:

General: Perennial, rhizomatous herb from long, slender rhizomes; stems 20-90 cm tall, exceeding the leaves.

Leaves: Sheaths tight, green; blades flat, 1.5-3 mm wide, the lower ones reduced to scales.

Flowers: Spikes 4 to 12, unstalked, 0.6-1 cm long, clustered into a 1.5- to 3.5-cm long cylindrical head, the upper spikes with both male and female flowers, the male flowers usually towards the tips, the lower spikes slightly remote; bracts subtending the spikes strongly reduced, only the lowermost sometimes bristlelike.

Fruits: Perigynia egg-shaped, 3-6 mm long, 1.5-2 mm wide, yellowish- to reddish-brown, plano-convex, the margins winged and fringed with teeth above the middle, 8- to 14-nerved on the backs, nerveless or nerved at the bases, the beaks bidentate, about as long as the perigynia bodies; female scales egg-shaped, nearly or as long and wide as the perigynia, pointed at the tips, reddish- or yellowish-brown, the centres 3-nerved with narrow, green margins; stigmas 2; achenes lens-shaped, 1.5-2 mm long.

Carex simulata Mack.

short-beaked sedge

HABITAT/RANGE:

Wet, often calcareous, fens in the montane zone; rare in SC BC (Chilcotin-Cariboo region); E to SK and S to ND, NM, UT, NV and CA.

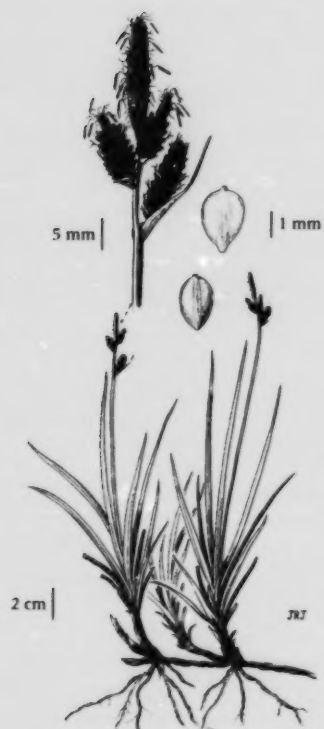
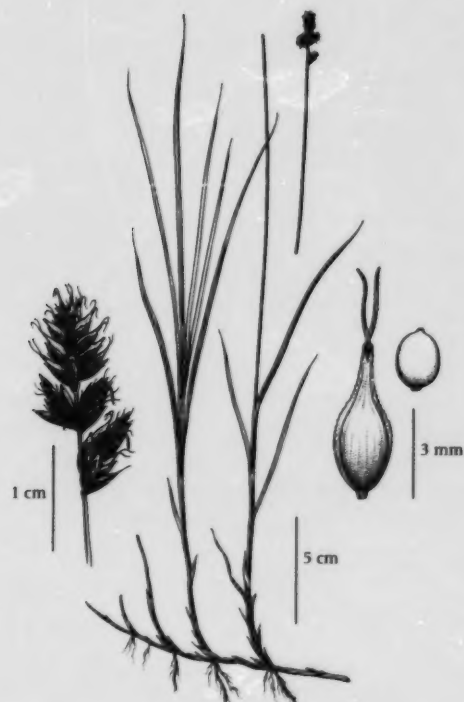
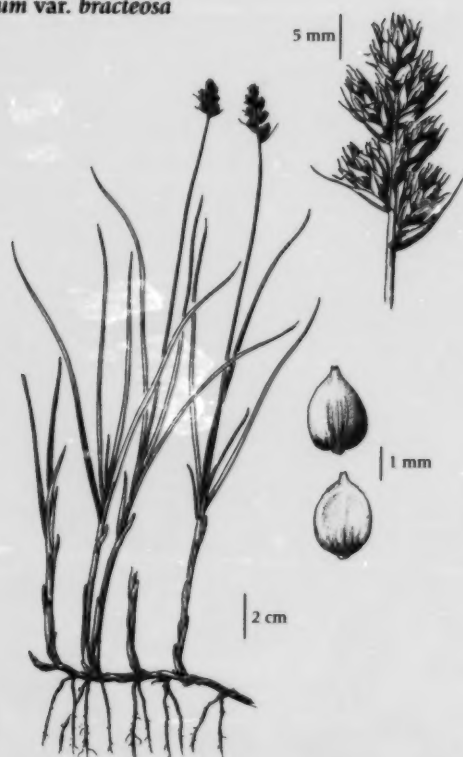
DESCRIPTION:

General: Perennial herb from stout, creeping rhizomes; stems 20-90 cm tall, arising singly or a few together, longer than the leaves.

Leaves: Sheaths green, the lower ones bladeless; blades 2 to 5 per stem, crowded toward the base, flat or nearly so, 1-2.5 mm wide.

Flowers: Spikes 5 to 15, 0.5-1 cm long, clustered into an egg-shaped or nearly cylindrical, 1- to 3-cm long head, usually distinguishable, unstalked, with both female and male flowers (sometimes with nearly or all male flowers or nearly or all female flowers), the male flowers towards the tips; bracts of the spikes inconspicuous, up to 1.5 cm long, much like the female scales.

Fruits: Perigynia broadly egg-shaped to elliptical, 1.7-2.5 mm long, 1.3-1.5 mm wide, appressed ascending, green to shiny-brown, strongly flattened, smooth, few-nerved below, short-stalked, the beaks entire, finely-toothed, 0.3-0.5 mm long; female scales egg-shaped, as long as and slightly wider than the perigynia, awn-tipped, brown, the midribs pale, the margins translucent; stigmas 2; achenes lens-shaped, smooth, 1.2-1.5 mm long.

*Carex scopulorum* var. *bracteosa**Carex siccata**Carex simulata*

Carex sitchensis Prescott ex Bong. (*C. barbarae* Dewey, *C. aquatilis* Wahlenb. var. *dives* [Holm] Kükenth., *C. aquatilis* var. *sitchensis* [Prescott] Kelso nom. superfl.)

Sitka sedge

HABITAT/RANGE:

Swamps, shorelines, marshes, fens and wet meadows in the lowland and montane zones; common throughout BC south of 56° N; N to SE AK and S to CA.

DESCRIPTION:

General: Perennial, tufted herb from long, creeping rhizomes; stems triangular, with rough edges, 30-120 cm tall, equalling the leaves.

Leaves: Sheaths tight, short; blades flat, well distributed along the stem, 3-7 mm wide, the lower ones slightly reduced.

Flowers: Spikes 3 to 10, the terminal 1 to 3 short-stalked, with male flowers, the lower spikes 2 to 7, with mostly female flowers and often several male flowers at the tops, with long stalks, 3-14 cm long, spreading or drooping; bracts subtending the spikes leaflike, sheathless, the lower ones longer than the inflorescence, the upper ones reduced.

Fruits: Perigynia egg-shaped, 2-3.6 mm long, 1.3-2.3 mm wide, brownish-green, 3-angled, the angles rounded, smooth to somewhat wrinkled, marginally 2-nerved, entire or minutely bidentate; female scales egg-shaped, shorter or longer than the perigynia, often shortly awn-tipped, brownish-red, with lighter 3-nerved centres and translucent margins, often whitish at the tips; stigmas 2; achenes lens-shaped, granular, 1.1-1.5 mm long.

Notes: Although Standley (1985) treated this taxon as a variety of *C. aquatilis*, we have not. To do so, it would require a similar treatment for many other taxa in our region now recognized at the species level. Also, for practical reasons, merging *C. sitchensis*, a community dominant, with *C. aquatilis* would result in resource managers naming the community after the latter.

Carex spectabilis Dewey (*C. tolmiei* Boott)

showy sedge

HABITAT/RANGE:

Moist to mesic meadows and forest openings in the montane to alpine zones; common in S BC, less frequent in C and NW BC; N to AK and YT, E to SW AB and S to CO, UT and CA.

DESCRIPTION:

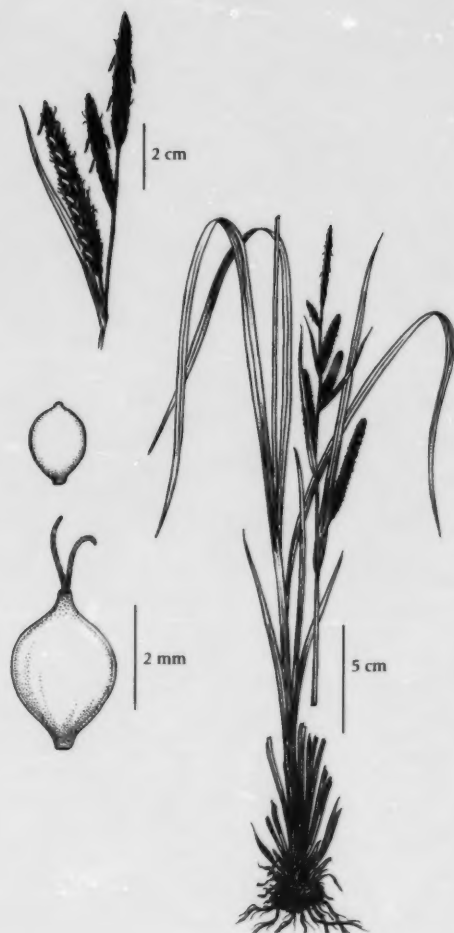
General: Perennial, tufted herb from short, stout rhizomes; stems 15-60 cm tall, exceeding the leaves.

Leaves: Sheaths purplish-red towards the bases; blades flat, 2-6 mm wide, the lower ones much reduced.

Flowers: Spikes 3 to 9, the terminal one with male flowers, the lower spikes 2 to 8, with female flowers, 1.5-3.5 cm long, short-stalked, erect, except the lowermost often long-stalked and nodding; bracts subtending the spikes sheathless, bristlelike, and shorter than the inflorescence, or leaflike and longer than the inflorescence.

Fruits: Perigynia egg-shaped, 2.5-3.5 mm long, 1.2-1.8 mm wide, yellow-green, or brown to purple-black, nerveless or faintly nerved, the beaks short, 0.3-0.5 mm long; female scales lanceolate, nearly as long as and narrower than the perigynia, pointed at the tips and extended into short awns, reddish-black, with light brown margins; stigmas 3; achenes 3-angled, egg-shaped, 1.4-1.7 mm long.

Notes: Sometimes difficult to separate from *C. podocarpa* in NW BC.

*Carex sitchensis**Carex spectabilis*

Carex sprengelii Dewey ex Spreng.

Sprengel's sedge

HABITAT/RANGE:

Moist to wet gravelly or sandy slopes and alluvial woodlands and open sites in the montane zone; rare in EC BC; E to PQ and NB and S to ME, MA, PA, OH, IN, IL, MO, NE and CO.

DESCRIPTION:

General: Perennial, tufted herb from stout, elongate, matted, shredded rhizomes; stems 30-90 cm tall, erect or decumbent, as long as or longer than the leaves.

Leaves: Sheaths long, concave to blunt; ligules short; blades 5 to 8 per stem, flat, scattered on the stem, 2.5-4 mm wide, the lower ones reduced.

Flowers: Spikes 3 to 7, the terminal 1 to 3 linear, 1-2 cm long, with male flowers, the lower 2 to 4 spikes cylindrical, 1-3.5 cm long, with female flowers, the spikes remote and long-stalked, spreading to nodding; bracts subtending the female spikes short-sheathing, leaflike, 1.5-2.5 cm long, shorter to longer than the subtended spikes.

Fruits: Perigynia nearly globe-shaped, 5-6 mm long, 1.5-2 mm wide, greenish to straw-coloured, smooth, shiny, 2-ribbed near the margins and with a few obscured nerves, spreading, short-stalked, the beaks deeply bidentate, slender, as long as or longer than the body; female scales lanceolate to narrowly egg-shaped, narrower than the perigynia, the centres green and 3-nerved, the tips pointed to more usually awned; stigmas 3; achenes 3-angled, 1.8-2.5 mm long.

Carex stipata Muhl. ex Willd. var. *stipata*

awl-fruited sedge; sawbeak sedge

HABITAT/RANGE:

Swamps, ditches, streambanks, lakeshores and wet meadows in the lowland, steppe and montane zones; frequent in BC S of 56° N, rare on the Queen Charlotte Islands; amphiberian, N to AK, E to NF and S to ME, MA, PA, NC, GA, AL, MS, OK, NM, AZ and OR; E Asia.

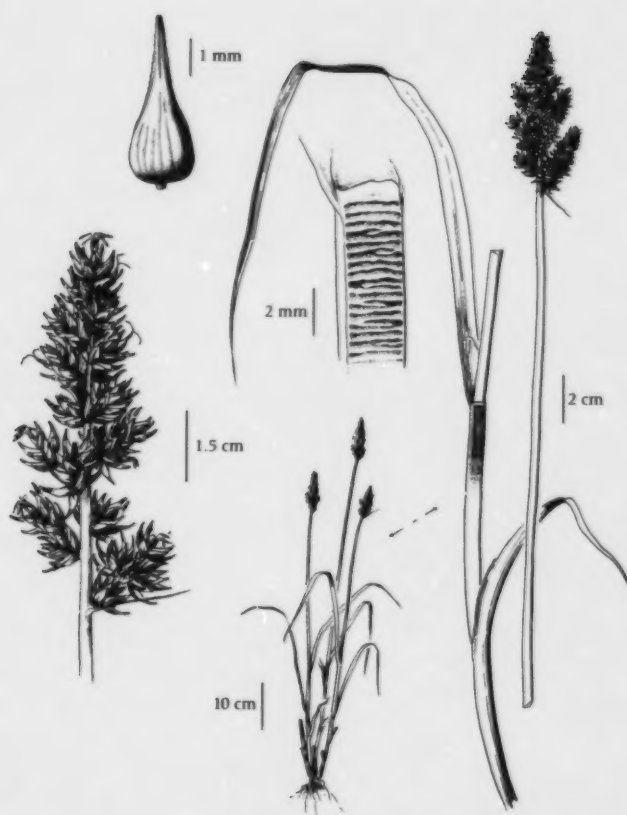
DESCRIPTION:

General: Perennial, densely tufted herb from short fibrous roots; stems 30-100 cm tall, usually a few together, about equalling the leaves, the lower ones reduced, 3-angled, the angles winged and saw-toothed above.

Leaves: Sheaths cross-wrinkled; blades 3 to 6 per stem, borne on the lower 1/2, or sometimes the lower 3/4 of the stem, flat, 5-11 mm wide, the lower ones reduced.

Flowers: Spikes numerous, usually densely aggregated into a cylindrical or egg-shaped, 3- to 10-cm long head, usually more or less separate below, egg-shaped, 2-3.5 cm long, unstalked, with both female and male flowers, the inconspicuous male flowers towards the tips; bracts short, inconspicuous, the lowest one usually hairlike, prolonged, 2-10 cm long.

Fruits: Perigynia narrowly triangular, 4-5.2 mm long, 1.5-1.8 mm wide, plano-convex, strongly nerved, spreading, yellow to brownish-translucent, smooth, very short-stalked, finely toothed above, the beaks about the length of the bodies, bidentate; female scales egg-shaped, narrower, about the length of the perigynia, brownish-translucent, the midribs greenish and prolonged into awns, the margins translucent; stigmas 2; achenes lens-shaped, 1.5-2 mm long.

*Carex sprengelii**Carex stipata* var. *stipata*

Carex stylosa C.A. Mey.

long-styled sedge

HABITAT/RANGE:

Marshes, fens, bogs and moist to wet meadows and gravelly sites in the lowland to alpine zones; frequent in coastal BC; circumpolar, N to AK, YT and NT, disjunct E to NF and S to NW WA; Greenland, N Europe and E Asia.

DESCRIPTION:

General: Perennial, tufted herb from short, stout rhizomes; stems 15-40 cm tall, exceeding the leaves.

Leaves: Sheaths purplish-red towards the bases; blades flat, 2-6 mm wide, the lower ones not reduced.

Flowers: Spikes 3 to 5, the terminal one with male flowers, the lower spikes 2 to 4, with female flowers, 0.5-2 cm long, short-stalked, erect; bracts subtending the spikes sheathless, bristlelike to scalelike, shorter than the inflorescence.

Fruits: Perigynia egg-shaped, 2.5-3.5 mm long, 1.5-1.8 mm wide, green, brown to dark brown, nerveless, the beaks obscure, less than 0.3 mm long; female scales lanceolate, shorter and narrower than the perigynia, pointed at the tips, brown, with light brown margins; styles prominently exserted, stigmas 3; achenes 3-angled, 1.5 mm long.

Carex supina Willd. ex Wahlenb. ssp. *spaniocarpa* (Steud.) Hult. (*C. spaniocarpa* Steud.)

spreading arctic sedge

HABITAT/RANGE:

Dry rocky or sandy, grassy slopes and rock outcrops in the montane zone; rare in WC BC, infrequent in N BC; circumpolar, N to AK, YT and NT, E to PQ and S to MN; Greenland, Eurasia.

DESCRIPTION:

General: Perennial, loosely tufted herb from short, spreading rhizomes; stems 4-20 cm tall, sharply triangular, roughened, clustered, longer than the leaves.

Leaves: Sheaths tight, brownish; blades 4 to 8, flat or more or less channeled, borne on the lower 1/3 of the stem, 0.5-1.8 mm wide, the lower ones reduced.

Flowers: Spikes 2 to 4, the terminal one linear, 10-13 mm long, stalked, with male flowers, the lower spikes 1 to 3, egg-shaped, few-flowered, with female flowers, unstalked to short-stalked, erect to spreading; bracts subtending the female spikes scalelike, awned, sheathless, slightly longer to slightly shorter than the spikes, the lowest one with conspicuous, translucent, ear-shaped lobes.

Fruits: Perigynia elliptical to egg-shaped, 2.5-3.5 mm long, 1.4-1.8 mm wide, yellowish-green to brown, smooth, shiny, with 2 prominent marginal nerves, short-stalked, the beaks short, obliquely cut, 0.4-0.8 mm long; female scales broadly egg-shaped, pointed or sometimes shortly awned, shorter than the perigynia, chestnut-brown, with lighter midribs and translucent margins; stigmas 3; achenes 3-angled, smooth, 1-1.6 mm long.

Carex swanii (Fern.) Mack.

Swan's sedge

HABITAT/RANGE:

Dry meadows in the lowland zone; rare in SW BC, known only from Hernando Island; introduced from E North America.

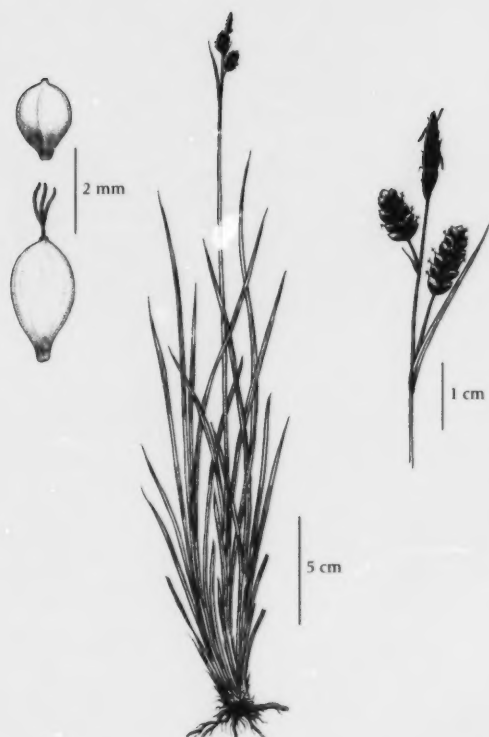
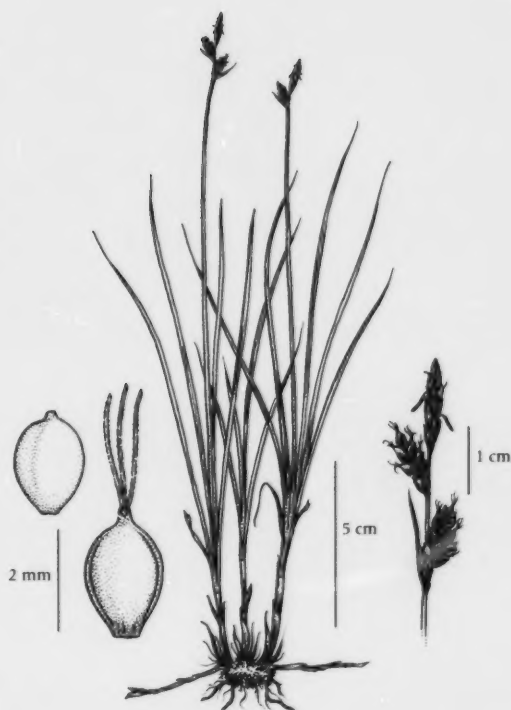
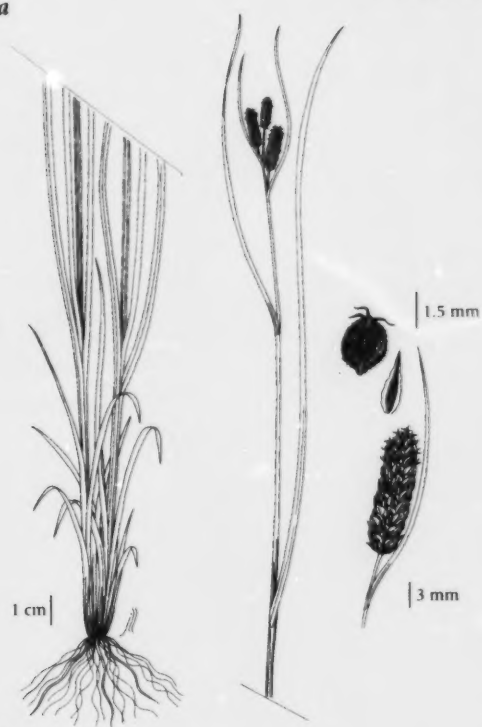
DESCRIPTION:

General: Perennial, tufted herb from short rhizomes; stems 30-60 cm tall, wine-red at the bases, shorter than the leaves.

Leaves: Sheaths tight; ligules longer than wide; blades 2 or 3 per stem, sparsely hairy, borne on the lower 1/3 of the stem, 1.5-3 mm wide, the lower ones reduced.

Flowers: Spikes 3 to 5, the terminal one linear, 1-2 cm long, with female flowers above, male flowers below, the lower spikes 2 to 4, egg-shaped, 1-2 cm long, 2-4 mm wide, with female flowers, the upper unstalked and approximate, the lower short-stalked and remote, erect to spreading; bracts subtending the female spikes leaflike, sheathless, as long as or longer than the inflorescence.

Fruits: Perigynia egg-shaped, 1.8-2.5 mm long, 1-1.5 mm wide, yellowish-green, densely hairy, few-ribbed, triangular, blunt-tipped; beakless; female scales about as long as the perigynia, egg-shaped, lower ones long-pointed, upper ones pointed, greenish, the margins translucent; stigmas 3; achenes 3-angled, 1.4-1.8 mm long.

*Carex stylosa**Carex supina* ssp. *spaniocarpa**Carex swanii*

Carex sychnocephala Carey
many-headed sedge

HABITAT/RANGE:

Shorelines and wet to moist meadows in the steppe and montane zones; infrequent in SC BC; N to S YT and S NT, E to S PQ and S to MI, WI, MO, SD, CO and N WA.

DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems 5-50 cm tall, decumbent, barely exceeding the leaves, often nodding.

Leaves: Sheaths tight; blades flat, 1.5-4 mm wide, borne on the lower 1/3 of the stem.

Flowers: Spikes 5 to 15, aggregated into a 1- to 3-cm long ellipsoid head, unstalked, with both female and male flowers, the female ones towards the tips; bracts subtending the spikes sheathless, the lowermost much-prolonged, 2-15 cm long, the others slightly shorter.

Fruits: Perigynia narrowly lanceolate, 4.5-6 mm long, 0.9-1.2 mm wide, light green to straw-coloured or brownish, more or less flattened, the margins very narrowly winged nearly to the bases and the upper 1/2 fringed with teeth, lightly several-nerved on both sides or nerveless below, the beaks bidentate, 2.5-4 mm long, narrowly margined and toothed below; female scales lanceolate, brownish, with green centres and translucent margins, somewhat shorter and narrower than the perigynia, short-awned; stigmas 2; achenes lens-shaped, 1.1-1.3 mm long.

Carex sylvatica Huds.

European woodland sedge

HABITAT/RANGE:

Moist to wet woodlands and open sites in the lowland zone; rare in SW BC, known only from the southern Gulf Islands; introduced from Europe.

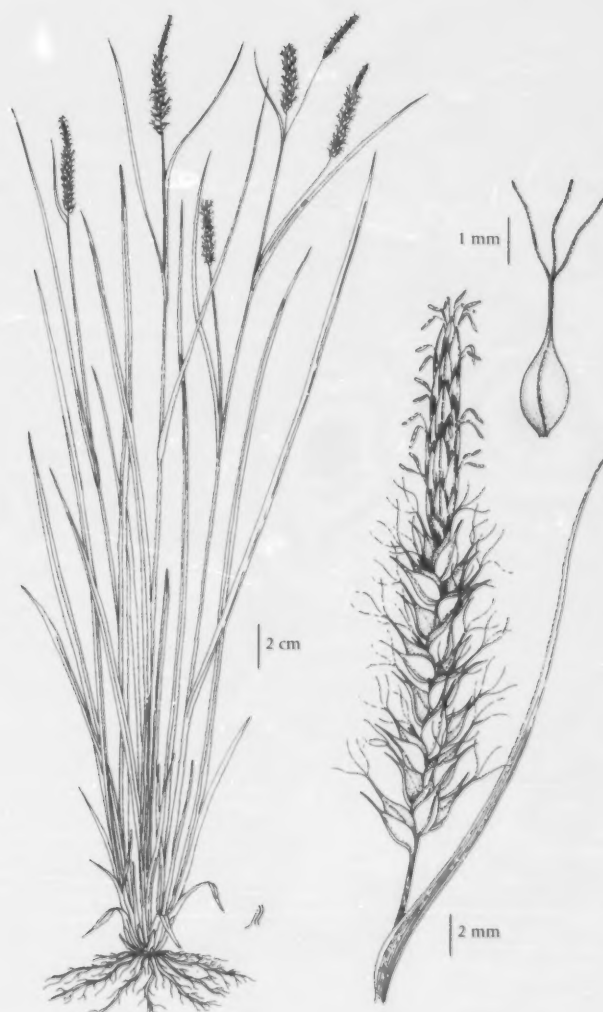
DESCRIPTION:

General: Perennial, tufted herb from short, stout rhizomes; stems 30-90 cm tall, erect or decumbent, longer than the leaves.

Leaves: Sheaths long, concave to blunt; ligules longer than wide; blades 3 to 5 per stem, flat, scattered on the stem, 2.5-4 mm wide.

Flowers: Spikes 1 to 7, the terminal spike linear, 1-2 cm long, usually with male flowers only, the lower 2 to 4 spikes narrowly cylindrical, 2-5 cm long, with female flowers, remote, long-stalked, nodding; bracts subtending the female spikes short-sheathing, leaflike, 1.5-10 cm long, the lowermost longer than the subtended spikes.

Fruits: Perigynia egg-shaped, 5-6 mm long, 1.5-2 mm wide, greenish to straw-coloured, smooth, shiny, 2-ribbed near the margins, short-stalked, the beaks slender, as long as or longer than the bodies, deeply bidentate; female scales lanceolate to narrowly egg-shaped, narrower than the perigynia, the centres green and 3-nerved, the tips pointed to more usually strongly awned; stigmas 3; achenes 3-angled, 1.8-2.5 mm long.

*Carex sychnocephala**Carex sylvatica*

Carex tenera Dewey

tender sedge

HABITAT/RANGE:

Mesic to dry meadows, shorelines and open forests in the steppe and montane zones; rare throughout BC east of the Coast-Cascade Mountains; E to PQ, NB and NS and S to ME, MA, NC, GA, AL, AR, NE, and NM.

DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems 20-70 cm tall, exceeding the leaves.

Leaves: Sheaths tight; blades flat, 1.5-2.5 mm wide, borne on the lower 1/3 of the stem.

Flowers: Spikes 4 to 10 in a long, loose inflorescence, 2.5-5 cm long, unstalked, with both female and male flowers, the female ones towards the tips; bracts subtending the spikes sheathless, reduced, inconspicuous.

Fruits: Perigynia lanceolate or narrowly egg-shaped, 3-4.5 mm long, 1.5-1.8 mm wide, light green to straw-coloured or brownish, more or less flattened, the margins winged nearly to the bases, the upper 1/2 fringed with teeth, strongly nerved on both sides, the beaks shallowly bidentate, about 1 mm long, narrowly margined and toothed below; female scales egg-shaped, brownish with green centres and translucent margins, somewhat shorter and narrower than the perigynia, short-awned; stigmas 2; achenes lens-shaped, 1.2-1.4 mm long.

Carex tenuiflora Wahlenb.

sparse-leaved sedge

HABITAT/RANGE:

Fens, bogs and moist forests in the montane zone; infrequent in BC east of the Coast Mountains and N of 52° N; circumpolar, N to AK, YT and NT, E to NF and S to ME, MA, NY, MI, MN, NM and WA; Eurasia.

DESCRIPTION:

General: Perennial, loosely tufted herb from long rhizomes; stems 15-60 cm tall, longer than the leaves.

Leaves: Sheaths tight; blades 3 to 7, borne on the lower part of the stem, 0.5-2 mm wide, flat or channeled.

Flowers: Spikes 3 to 5 in a terminal head, egg-shaped, many-flowered, 5-10 mm long, ascending, with both female and male flowers, the female flowers towards the tips, the male flowers inconspicuous; all bracts strongly reduced.

Fruits: Perigynia elliptical, elongated, 3-3.5 mm long, 0.8-1.3 mm wide, greenish-white, minutely whitish-dotted, plano-convex, smooth, faintly nerved, unstalked; female scales egg-shaped, covering the perigynia, blunt, light green, with green midribs; stigmas 2; achenes lens-shaped, 1.7-2 mm long.

Carex tonsa (Fern.) Bickn. var. *tonsa* (*C. rugosperma* Mack. var. *tonsa* [Fern.] Voss, *C. umbellata* Schkuhr ex Willd. var. *tonsa* Fern.)

bald sedge

HABITAT/RANGE:

Sand dunes in the montane zone; rare in EC BC, known only from Tête Jaune Cache; E to NE, and S to ME, MA, VA, SC, GA, IN, IL and MO.

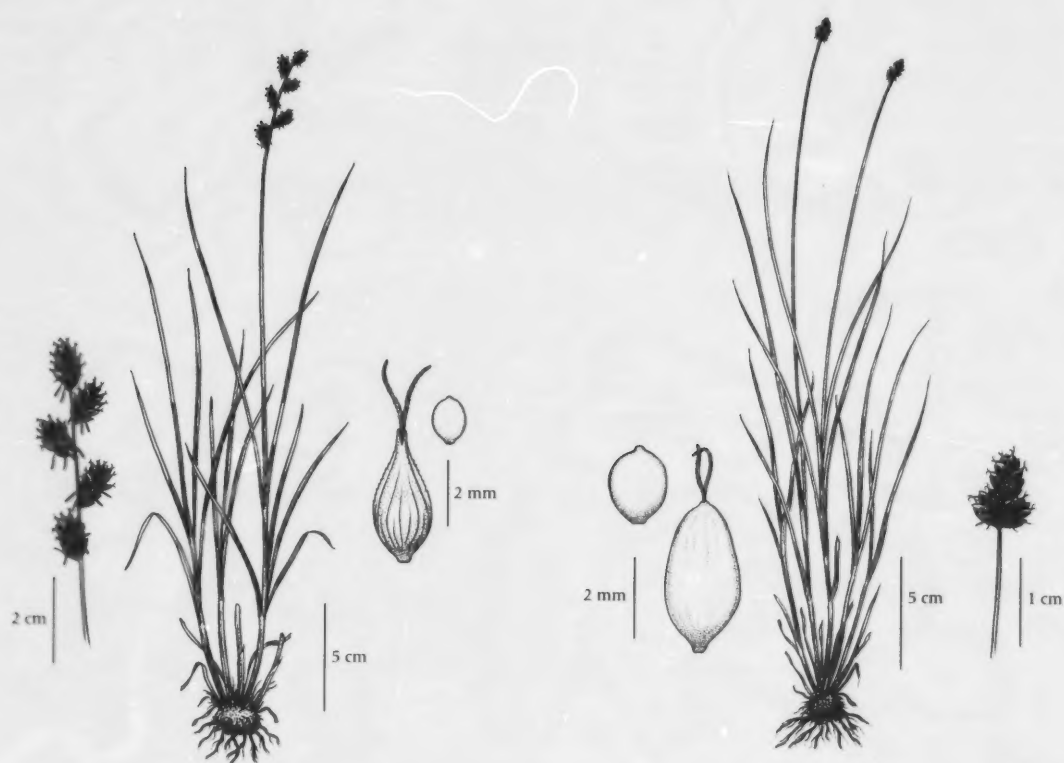
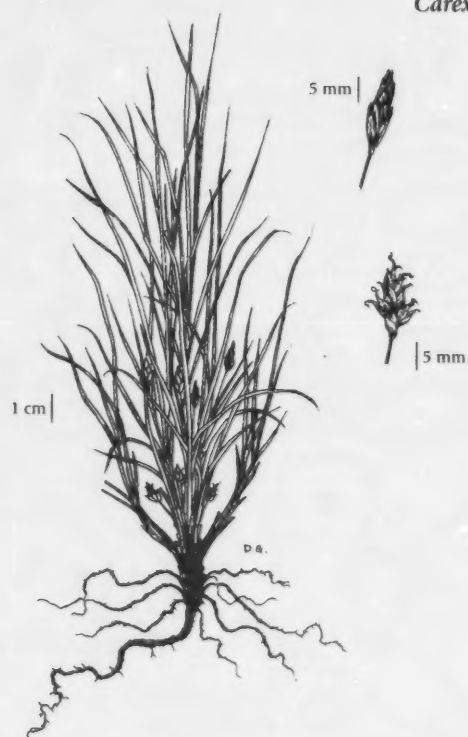
DESCRIPTION:

General: Perennial, loosely tufted herb from slender, scaly rhizomes; stems 2 to 15 cm tall, usually much shorter than the leaves.

Leaves: Sheaths reddish-brown to brown, the lower ones well-developed; blades numerous, flat or channeled, the margins rolled-under, gradually tapering to the tips, 2-4.5 mm wide.

Flowers: Spikes 3 to 5, the terminal one lanceolate, 6-12 mm long, with male flowers, most of the spikes clustered at the bases of the stem, the lower spikes 2 to 4, short-cylindrical, 6-12 mm long, with female flowers, long-stalked, erect; bracts subtending the lower spikes awnlike, 1 cm long or less.

Fruits: Perigynia broadly egg-shaped, 3.5-4.5 mm long, 1-1.5 mm wide, pale greenish or straw-coloured, 3-angled, sparsely hairy, 2-keeled, nerveless, crowded, erect, short-stalked, the beaks shallowly bidentate, 1.7-2.5 mm long; female scales broadly egg-shaped, whitish or straw-coloured with a purplish tinge, slightly shorter than the perigynia; stigmas 3; achenes 3-angled, 1.7-2 mm long.

*Carex tenera**Carex tenuiflora**Carex tonsa* var. *tonsa*

Carex torreyi Tuckerm.

Torrey's sedge

HABITAT/RANGE:

Mesic to moist meadows and shrublands in the montane zone; rare in NE BC, known only from the Peace River area; E to MB and S to WI, MN, SD and CO.

DESCRIPTION:

General: Perennial, tufted herb from short rhizomes; stems 15-50 cm tall, short-hairy, roughened above, wine-red at the bases, equalling or longer than the leaves.

Leaves: Sheaths tight, brownish, soft-hairy, deeply concave at the tips; ligules longer than wide; blades 2 or 3 per stem, flat, soft-hairy, the margins more or less rolled-under, borne on the lower 1/3 of the stem, 1.5-3.5 mm wide, the lower ones reduced.

Flowers: Spikes 3 to 5, the terminal one linear, 8-16 mm long, short-stalked, with male flowers, the lower spikes 2 to 4, cylindrical, 6-12 mm long, 4-7 mm wide, with female flowers, unstalked to short-stalked, approximate to somewhat separate, erect to spreading; bracts subtending the female spikes leaflike, sheathless, as long as or longer than the inflorescence.

Fruits: Perigynia egg-shaped to broadly egg-shaped, 2.5-3.5 mm long, 1.8-2.2 mm wide, yellowish-green, smooth, many-nerved, round-tapered to short stalks, the beaks short, cylindrical; female scales about 1/2 the length of the perigynia, egg-shaped, the lower ones long-pointed, the upper ones pointed, reddish-to brownish-yellow, the centres green, 3-nerved, the margins broad, translucent; stigmas 3; achenes 3-angled, 2-2.5 mm long.

Carex tracyi Mack. (*C. leporina* auct. non L.)

Tracy's sedge

HABITAT/RANGE:

Moist to wet meadows in the lowland and montane zones; infrequent on Vancouver Island, rare elsewhere in BC; S to CA.

DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems triangular, 20-50 cm tall, exceeding the leaves.

Leaves: Sheaths tight; blades flat, 2-4 mm wide, borne on the lower 1/3 of the stem.

Flowers: Spikes 4 to 8, aggregated into an elongated head 1-2.5 cm long, unstalked, with both female and male flowers, the female ones towards the tips; bracts subtending the spikes sheathless, reduced, inconspicuous, the lowermost often awnlike.

Fruits: Perigynia egg-shaped, 4-5 mm long, 2-2.5 mm wide, dark brown, the margins winged nearly to the bases, the upper 1/2 fringed with teeth, lightly several-nerved on the back, strongly nerved below, the beaks shallowly bidentate, up to 2 mm long, narrowly margined and toothed below; female scales elliptical, pointed, reddish-brown, with broad translucent margins and lighter centres, longer and wider than the perigynia; stigmas 2; achenes lens-shaped, 1.6 mm long.

Carex tribuloides Wahlenb.

blunt broom sedge

HABITAT/RANGE:

Moist to wet sites in the lowland, rare in the lower Fraser Valley; introduced from E North America.

DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems 50-90 cm tall, exceeding the leaves.

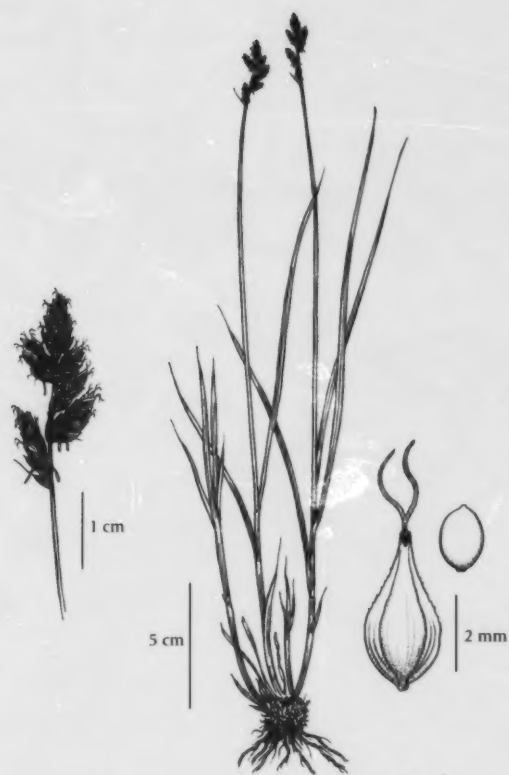
Leaves: Sheaths tight; blades flat, 2.5-7 mm wide, borne along the stems, the lower ones strongly reduced.

Flowers: Spikes 6 to 15, aggregated into an elongated head 2-5 cm long, unstalked, with both female and male flowers, the female ones towards the tips; bracts subtending the spikes sheathless, reduced, inconspicuous.

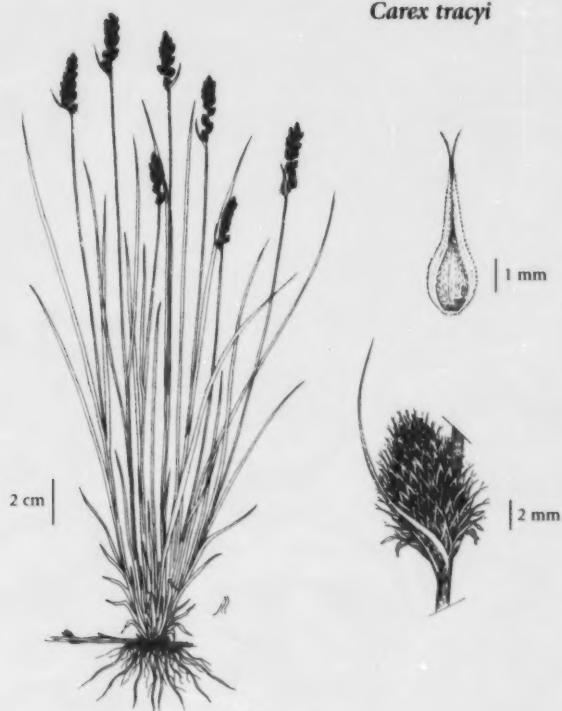
Fruits: Perigynia narrowly lanceolate, 3-5 mm long, 1-1.5 mm wide, pale green or straw-coloured, more or less flattened, distended over the achenes, the margins winged nearly to the bases, the upper 1/2 fringed with teeth, lightly several-nerved on both sides, the beaks shallowly bidentate, 1-1.2 mm long, narrowly margined and toothed below; female scales elliptical, pointed, brownish, with translucent margins, somewhat shorter and narrower than the perigynia; stigmas 2; achenes lens-shaped, 1.5 mm long.



Carex torreyi



Carex tracyi



Carex tribuloides

Carex trisperma Dewey
three-seeded sedge

HABITAT/RANGE:

Bogs and moist to wet forests in the montane zone; infrequent in BC east of the Coast-Cascade Mountains; E to NF and S to ME, MA, NC, TN, and MN.

DESCRIPTION:

General: Perennial, loosely tufted herb from elongated, light brown, branched stolons; stems 20-70 cm tall, slender and arching, shorter than or about as long as the leaves.

Leaves: Sheaths tight; blades numerous, borne on the lower part of the stem, 0.3-2 mm wide, flat, the lower ones reduced.

Flowers: Spikes 3 to 5 in a long, narrow inflorescence, separated, the uppermost closer together, egg-shaped, 1- to 6-flowered, about 4-6 mm long, ascending, with both female and male flowers, the female flowers towards the tips, the male flowers inconspicuous; bracts awnlike, the lowermost 3-10 cm long.

Fruits: Perigynia elliptical, 2.5-3.7 mm long, 1.5-2 mm wide, light green, plano-convex, smooth, finely-nerved, the beaks 0.4 mm long, entire; female scales egg-shaped, covering 1/2 of the perigynia, pointed, green, with green midribs; stigmas 2; achenes lens-shaped, 2 mm long, filling the perigynia.

Carex tumulicola Mack.
foothill sedge

HABITAT/RANGE:

Mesic Garry oak stands and dry, grassy meadows and rock outcrops in the lowland zone; rare in SW BC, known only from southern Vancouver Island; S to CA.

DESCRIPTION:

General: Perennial, loosely tufted herb from elongated, fibrous rhizomes; stems 30-80 cm tall, arising in circular clusters with less dense centres, roughened on the angles above, longer than the leaves.

Leaves: Sheaths tight; blades 2 to 3 per stem, borne on the lower 1/4 of the stem, flat or channeled below, 1.5-2 mm wide, reduced to scales at the base of the stem.

Flowers: Spikes 4 to 8, the upper ones rising close together, the lower ones noticeably remote, unstalked, with both female and male flowers, the inconspicuous male flowers towards the tips, female flowers at the bases; bracts awnlike, the lowermost conspicuous, slightly shorter to longer than the inflorescence.

Fruits: Perigynia egg-shaped or elliptical, 3.6-5 mm long, 1.8-2.2 mm wide, with faint inconspicuous nerves, green, smooth, very short-stalked, finely toothed on the upper halves, the beaks 1/3 the length of the bodies, bidentate; female scales egg-shaped, equalling or slightly shorter than the perigynia, pointed or short-awned, brown, the midribs greenish, the margins translucent; stigmas 2; achenes lens-shaped, smooth, 1.8-2.2 mm long, filling the bodies of the perigynia.

Carex unilateralis Mack.
one-sided sedge

HABITAT/RANGE:

Moist to wet sites in the lowland and montane zones; infrequent in S BC; S to ID and CA.

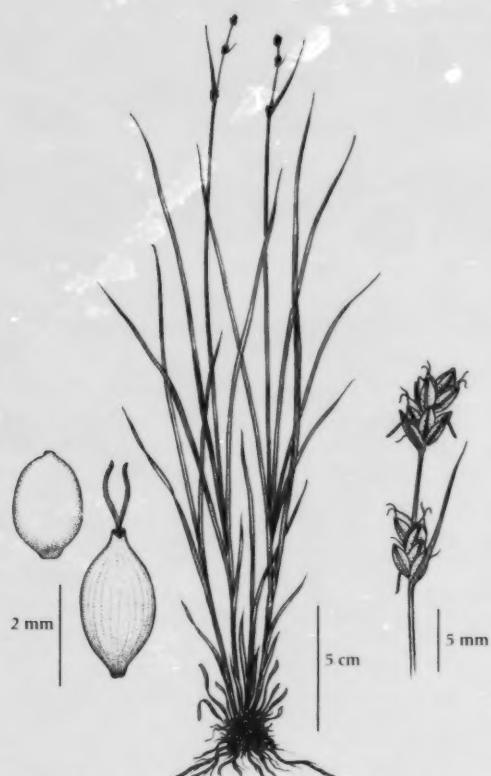
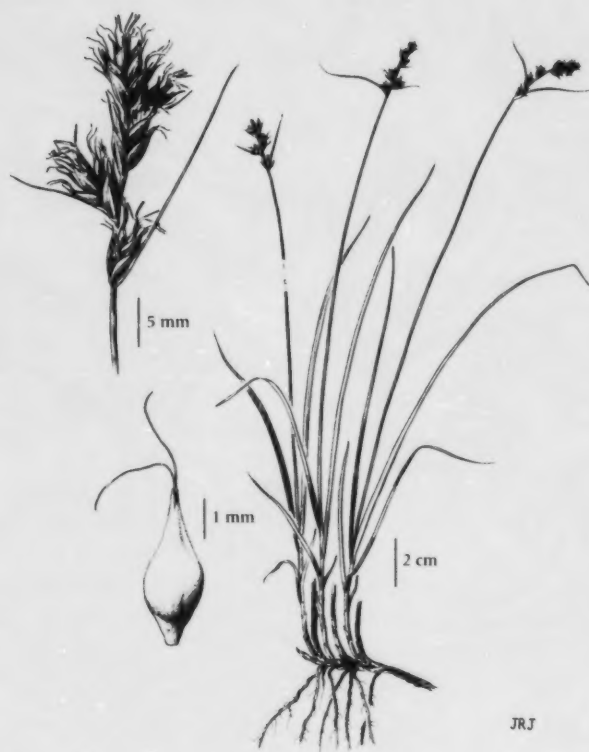
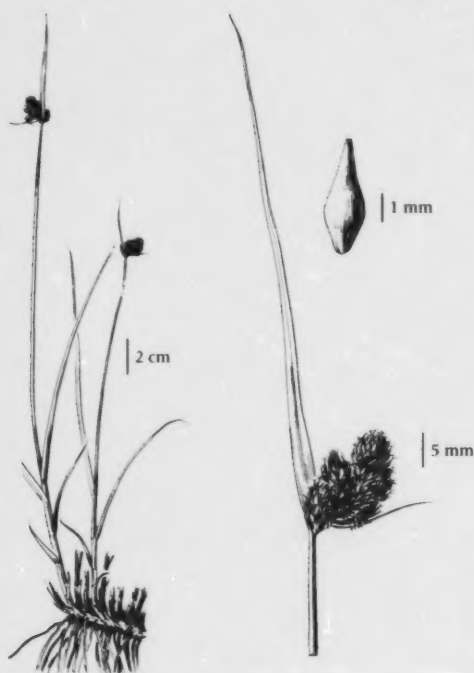
DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems 20-80 cm tall, exceeding the leaves.

Leaves: Sheaths tight; blades flat, 2-4 mm wide, borne on the lower 1/3 of the stem.

Flowers: Spikes 5 to 15, aggregated into a 1-3 cm long head, unstalked, with both female and male flowers, the female ones towards the tips; bracts subtending the spikes sheathless, the lower one much prolonged and 5-25 cm long, the others reduced and shorter.

Fruits: Perigynia lanceolate or narrowly egg-shaped, 4-5 mm long, 1.5-1.8 mm wide, light green to straw-coloured or brownish, more or less flattened, the margins winged nearly to the bases and the upper 1/2 fringed with teeth, lightly several-nerved on both sides or nerveless below, the beaks shallowly bidentate, less than 1 mm long, narrowly margined and toothed below; female scales egg-shaped, brownish with green centres and translucent margins, somewhat shorter and narrower than the perigynia, short-awned; stigmas 2; achenes lens-shaped, 1.6-2 mm long.

*Carex trisperma**Carex tumulicola**Carex unilateralis*

Carex utriculata Boott (*C. rostrata* Stokes var. *utriculata* [Boott] Bailey)

beaked sedge; bottle sedge

HABITAT/RANGE:

Swamps, marshes, fens, pools, shorelines and wet meadows in the lowland, steppe and montane zones; common throughout BC except absent on the Queen Charlotte Islands; circumpolar, N to AK, YT and NT, E to NF and S to ME, MA, VA, TN, IA, NE, CO and CA; Greenland, Iceland, Eurasia.

DESCRIPTION:

General: Perennial, tufted herb from short-creeping rhizomes; stems 30-120 cm tall, triangular, smooth, except slightly rough below the inflorescence, slightly longer than the leaves.

Leaves: Sheaths tight; ligules as long as wide to slightly wider than long; blades 4 to 8 per stem, cross-walled, borne on the lower 1/2 of the stem, 5-15 mm wide, flat, the margins rolled-under, the lower ones reduced, persistent.

Flowers: Spikes 4 to 7, the terminal 2 or 3 linear, 1.5-5 cm long, long-stalked, with many male flowers, the lower spikes 2 to 4, cylindrical, 2.5-7.5 cm long, with female flowers, or some with male flowers above the female flowers, long-stalked, the lowermost drooping; bracts subtending the lowest spike leaflike, sheathless, the lowest longer than the inflorescence.

Fruits: Perigynia elliptical, 5-9 mm long, 1.7-3 mm wide, yellowish-green to reddish-brown, somewhat inflated, smooth, shiny, strongly nerved, contracted into long beaks 1.5-3 mm long, the beaks bidentate with straight teeth; female scales lanceolate to egg-shaped, pointed, narrower and shorter than the perigynia, yellowish- to reddish-brown, with 3-nerved, lighter centres and narrow, translucent margins; stigmas 3; achenes 3-angled, 1.7-2.4 mm long.

Carex vaginata Tausch (*C. saltuensis* L.H. Bailey)

sheathed sedge

HABITAT/RANGE:

Swamps, bogs, seepage areas and wet meadows in the montane zone; frequent in N and E BC, rare in SC BC; circumpolar, N to AK, YT and NT, E to NF and S to ME, VT, MI, WI, MN and MT; Eurasia.

DESCRIPTION:

General: Perennial herb from slender, creeping rhizomes; stems 10-60 cm tall, arising singly or a few together, longer than the leaves.

Leaves: Sheaths tight, tubular; blades 4 to 8 per stem, flat or channeled towards the bases, borne on the lower 1/4 of the stem, 1-5 mm wide.

Flowers: Spikes 3 to 5, more or less remote, long-stalked, erect to spreading, the terminal one linear, 1-2 cm long, with male flowers, the lower 2 to 4 spikes cylindrical, with female flowers; bracts subtending the female spikes sheathing, leaflike, 1-3 cm long, shorter than the spikes.

Fruits: Perigynia egg-shaped to elliptical, 3.5-5 mm long, 1.5-2 mm wide, yellowish-green or brownish, slightly inflated, smooth, shiny, strongly 2-nerved marginally, spreading or ascending, short-stalked, the beaks bidentate, often dark-tipped, 0.6-1.2 mm long; female scales egg-shaped, shorter than the perigynia, brown, the centres pale green, the margins translucent, the tips round to short-awned; stigmas 3; achenes 3-angled, 1.6-2.2 mm long.

*Carex utriculata**Carex vaginata*

Carex vallicola Dewey var. *vallicola*

valley sedge

HABITAT/RANGE:

Moist to dry meadows, open forests and shrublands in the steppe and montane zones; rare in SC BC; S to CO, UT, NV and CA.

DESCRIPTION:

General: Perennial, tufted herb from short, fibrous rhizomes, sometimes the rhizomes not evident; stems 15-40 cm tall, arising in loose clusters, roughened on the angles above, longer than the leaves.

Leaves: Sheaths tight; blades 2 to 3 per stem, borne on the lower 1/4 of the stem, flat or channeled below, 0.5-2 mm wide, the lowermost reduced towards the bases of the stems.

Flowers: Spikes 4 to 8, forming an elongated head 1-2 cm long, the lower ones noticeably remote, unstalked, with both female and male flowers, the inconspicuous male flowers towards the tips; bracts scalelike, much reduced, inconspicuous.

Fruits: Perigynia elliptical to cylindrical, 3-3.7 mm long, 1.8-2.2 mm wide, with faint inconspicuous nerves, green, smooth, very short-stalked, the beaks 1 mm long, shallowly bidentate; female scales egg-shaped, equalling or slightly shorter than the perigynia, pointed or short-awned, greenish-translucent, the midribs greenish, the margins translucent; stigmas 2; achenes lens-shaped, smooth, 1.8-2.2 mm long, filling the bodies of the perigynia.

Carex vesicaria L. (*C. inflata* Huds.)

lesser bladder sedge

HABITAT/RANGE:

Fens, swamps, marshes, shorelines and wet meadows in the steppe and montane zones; frequent in S BC E of the Coast-Cascade Mountains, less frequent northward; E to NF and S to ME, MA, VA, MO, SD, NM, AZ and CA; Eurasia.

DESCRIPTION:

General: Perennial, tufted herb from short-creeping rhizomes; stems 30-100 cm tall, triangular, rough below the inflorescence, longer than the leaves.

Leaves: Sheaths tight, the basal ones shattered and forming feather-like patterns; ligules longer than wide; blades 4 to 8 per stem, flat, cross-walled, the margins rolled-under, borne on the lower portion of the stem, 3-7 mm wide, the lower ones reduced, persistent.

Flowers: Spikes 4 to 7, the terminal 2 or 3 linear, 1.5-5 cm long, long-stalked, with many male flowers and occasionally with a few female flowers, the lower spikes 2 to 4, cylindrical, 2.5-7.5 cm long, with female flowers or some with male flowers above the female flowers, short-stalked, erect to spreading; bracts subtending the lowest spike leaflike, sheathless, longer than the inflorescence.

Fruits: Perigynia egg-shaped, 7-10 mm long, 1.5-3 mm wide, yellowish-green to reddish-brown, somewhat inflated, smooth, shiny, strongly nerved, abruptly contracted from the broad bases to beaks, the beaks 1.5-3 mm long, bidentate, with straight teeth; female scales lanceolate to egg-shaped, pointed or with short awns, narrower and shorter than the perigynia, yellowish- to reddish-brown, with lighter centres and narrow, translucent margins; stigmas 3; achenes 3-angled, 1.9-2.3 mm long.

Notes: The distribution and taxonomy of this species in BC is poorly known.

*Carex vallicola* var. *vallicola*

JRT

*Carex vesicaria*

KUE

Carex viridula Michx. ssp. *viridula* (*C. oederi* Retz. ssp. *viridula* [Michx.] Hult.)

green sedge

HABITAT/RANGE:

Swamps, bogs, lakeshores and wet meadows in the lowland, steppe and montane zones; common in S BC, less frequent northward; amphiberian, N to AK, YT and NT, E to NF and S to ME, MA, PA, OH, IN, IL, MN, SD, NM, UT, NV and CA; E Asia.

DESCRIPTION:

General: Perennial, densely tufted herb from fibrous roots; stems 10-40 cm tall, longer than the leaves.

Leaves: Sheaths pale below; blades 4 to 8 per stem, channeled, borne on the lower 1/2 of the stem, 1-3 mm wide, the lower ones reduced.

Flowers: Spikes 3 to 7, the terminal unstalked or short-stalked, linear, 7-21 mm long, with male flowers (rarely some female flowers), the lower spikes 2 to 6, erect, cylindrical, 5-11 mm long, many-flowered, with female flowers (sometimes the upper with male flowers at the tips), unstalked or nearly so; bracts subtending the female spikes conspicuous, leaflike, 4-9 cm long, much exceeding the inflorescence, the sheaths 2-20 mm long, the upper bracts shorter.

Fruits: Perigynia egg-shaped to elliptical, mostly spreading, 2-3.2 mm long, 1.2-1.3 mm wide, yellowish-green to green, smooth, several-nerved, the beaks shortly bidentate, about 1/3 as long as the bodies of the perigynia; female scales egg-shaped, pointed, short-awned at the tips, shorter than the perigynia, reddish, with greenish midribs and narrow translucent margins; stigmas 3; achenes 3-angled, smooth, 1.4-1.9 mm long.

Carex vulpinoidea Michx.

fox sedge

HABITAT/RANGE:

Wet meadows, swamps, marshes, and streambanks in the lowland, steppe and montane zones; rare in S BC; E to NF and S to ME, MA, PA, NC, FL, MS, TX, NM, AZ and CA.

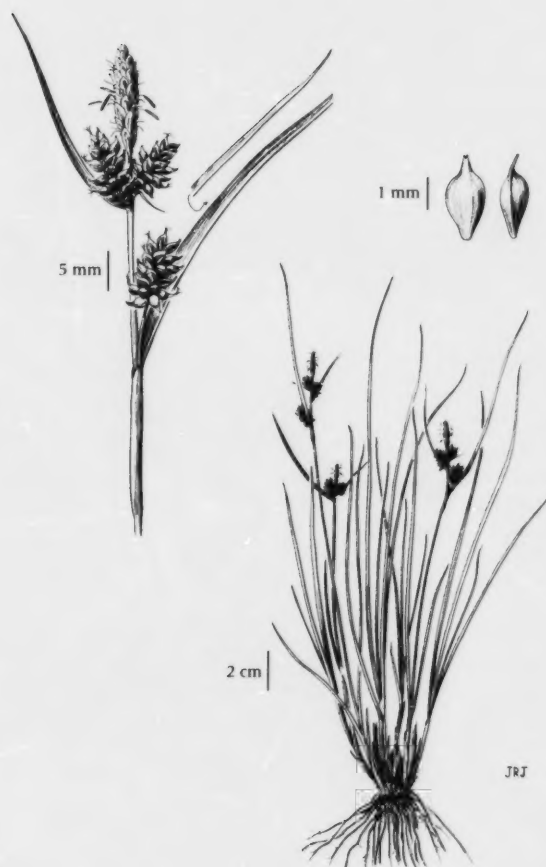
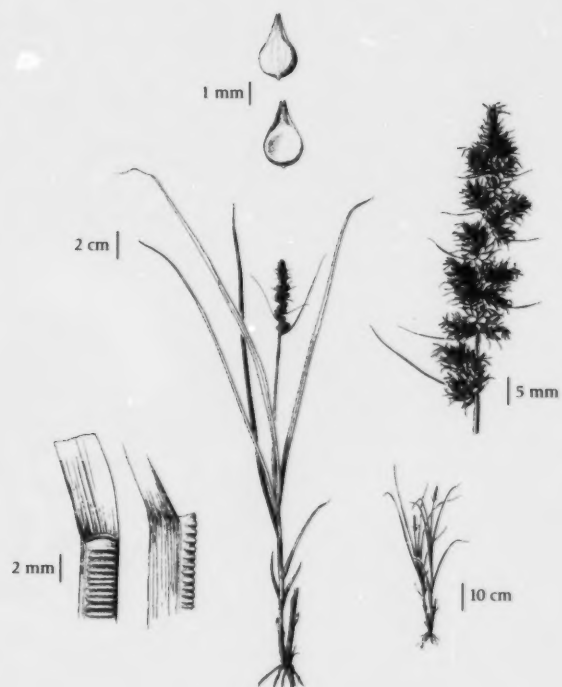
DESCRIPTION:

General: Perennial, tufted herb from short, stout rootstocks; stems 20-100 cm tall, usually a few together, roughened on the angles above, usually shorter than the leaves.

Leaves: Sheaths cross-wrinkled; blades 4 to 5 per stem, borne on the lower 1/2, or sometimes the lower 3/4 of the stem, flat or nearly so, 2-5 mm wide, the lower ones much reduced.

Flowers: Spikes numerous, densely aggregated into a linear to cylindrical, 2-15 cm long head, more or less separate below, egg-shaped, 2-3 cm long, unstalked, with both female and male flowers, the male flowers towards the tips; bracts hairlike, 8-10 cm long below, 2-2.5 cm long above, conspicuous throughout the inflorescence.

Fruits: Perigynia egg-shaped, 2-3.5 mm long, 1-1.8 mm wide, plano-convex, faintly nerved, spreading, yellowish-green to straw-coloured, smooth, very short-stalked, finely toothed above, the beaks 1/2 to fully the length of the bodies, bidentate; female scales egg-shaped, equalling or slightly shorter than the perigynia, brownish, the midribs greenish, prolonged into awns, the margins translucent; stigmas 2; achenes lens-shaped, smooth, 1.3-1.6 mm long.

*Carex viridula* ssp. *viridula**Carex vulpinoidea*

Carex xerantica Bailey

dry-land sedge

HABITAT/RANGE:

Dry slopes and open forests in the steppe and montane zones; rare in SC, SE and NE BC; E to S MB and S to MN and NE.

DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems 30-60 cm tall, exceeding the leaves.

Leaves: Sheaths tight; blades flat, 2-3 mm wide, borne on the lower 1/3 of the stem, the lower ones reduced.

Flowers: Spikes 3 to 6, aggregated into a 3- to 5-cm long head, unstalked, with both female and male flowers, the female ones towards the tips; bracts subtending the spikes sheathless, reduced, inconspicuous.

Fruits: Perigynia cylindrical to elliptical, 4-5.5 mm long, 2-2.5 mm wide, greenish or golden-yellow, more or less flattened, the margins winged nearly to the bases and the upper 1/2 fringed with teeth, lightly several-nerved on both sides or nerveless below, the beaks obliquely cut, 1-1.3 mm long, narrowly margined and toothed below; female scales elliptical, light silvery-brown, with translucent margins, concealing the perigynia; stigmas 2; achenes lens-shaped, 2.5 mm long.

CYPERUS

1. Plants 3-20 cm tall; scale tips conspicuously recurved; heads more or less short *C. squarrosus*
1. Plants 10-70 cm tall; scale tips not recurved; heads more or less elongate.
 2. Plants from fibrous roots, without rhizomes; native plants of SC BC *C. erythrorhizos*
 2. Plants from rhizomes terminating in small tubers up to 15 mm wide; introduced plants from Hatzic, lower Fraser valley *C. esculentus*

Cyperus erythrorhizos Muhl.

red-rooted cyperus

HABITAT/RANGE:

Moist to wet lakeshores in the steppe zone; rare in SC BC; disjunct E to S ON and S to FL, MS, TX, NM, AZ and CA.

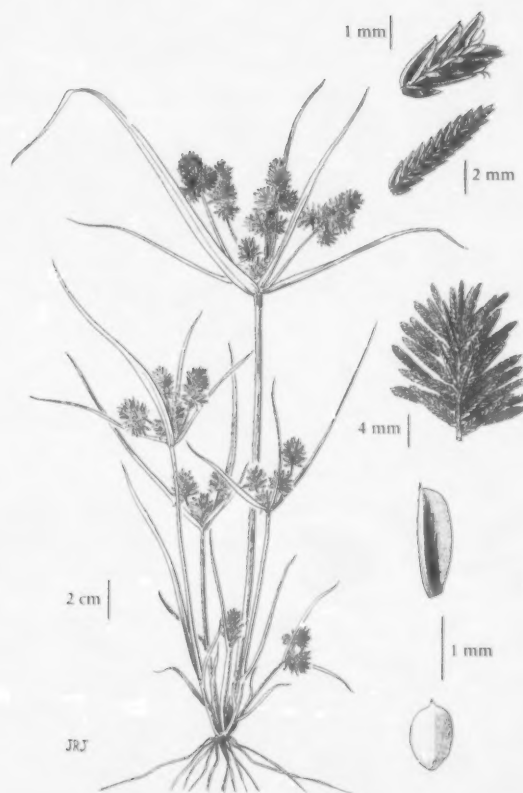
DESCRIPTION:

General: Annual, tufted herb from fibrous roots; stems stout, mostly 5-70 cm tall.

Leaves: Clustered towards the bases; blades well-developed, mostly 2-9 mm wide, elongate, about as long as the stem.

Flowers: Inflorescence of dense, more or less elongate, head-like clusters, the terminal clusters unstalked, the others on rays up to 7 cm long (or some rays bearing only single spikes), each cluster with numerous, crowded, spirally arranged, cylindrical spikes on the elongate axis of the inflorescence, the spikes 1-4 cm long, the spikelets 6- to many-flowered, 3-12 mm long, 1-1.5 mm wide, slender, horizontally spreading; involucre bracts several, elongate, unequal, sometimes a little wider than the leaves, much surpassing the inflorescence.

Fruits: Scales obscurely nerved, egg-shaped, closely set, the tips surpassing the ones below them by 0.4-0.7 mm, not recurved, the margins narrow, golden brown, the keels prominent, excurrent, green, 1.2-1.5 mm long; rachillas narrowly translucent-winged, persistent, but the scales eventually falling from them and the wings readily deciduous in short segments at maturity; stamens 3; achenes unequally 3-angled, pale, shining, 0.7-1 mm long.

*Carex xerantica**Cyperus erythrorhizos*

Cyperus esculentus L. var. *leptostachyus* Boeckl.

yellow nut-grass

HABITAT/RANGE:

Moist to mesic cultivated fields in the lowland zone; rare in the lower Fraser Valley; introduced from Europe.

DESCRIPTION:

General: Perennial or annual, sweet-scented herb from long, slender, scaly rhizomes, terminating in small tubers up to 15 mm wide; stems solitary, stout, sharply triangular, 10-70 cm tall.

Leaves: Clustered at the bases; blades elongate, mostly 3-8 mm wide, shorter than to exceeding the stem.

Flowers: Inflorescence of dense, more or less elongate, head-like clusters with more or less elongate stalks, the terminal clusters unstalked, the others borne singly or in small groups at the ends of rays up to 7 cm long, each cluster with 5 to 16 spikes, the spikes 0.5-5 cm long, the spikelets 6- to 22-flowered, 1-2.5 cm long, linear to egg-shaped, ascending to spreading; stamens 3; involucre bracts 2 to 9, elongate, unequal, sometimes a little wider than the leaves, usually several surpassing the inflorescence.

Fruits: Scales several-nerved, the lowest ones shorter, broad, much overlapping laterally, but not closely set, mostly (2) 2.5-3 (4) mm long, the tips surpassing the ones below them by 1.1-1.7 mm, not recurved; rachillas broadly and translucently winged, persistent, the scales falling from them at maturity; achenes unequally 3-angled, 1.3-2 mm long.

Cyperus squarrosus L. (*C. aristatus* Rottb., *C. inflexus* Muhl.)

awned cyperus

HABITAT/RANGE:

Moist to wet, often sandy sites in the lowland and steppe zones; rare on S Vancouver Island and SC BC; cosmopolitan, E to PQ and NB and S to FL, TX, NM, AZ, CA and MX; Asia, S America, Africa.

DESCRIPTION:

General: Annual, sweet-scented, tufted herb from short rootstocks; stems slender, 3-20 cm tall.

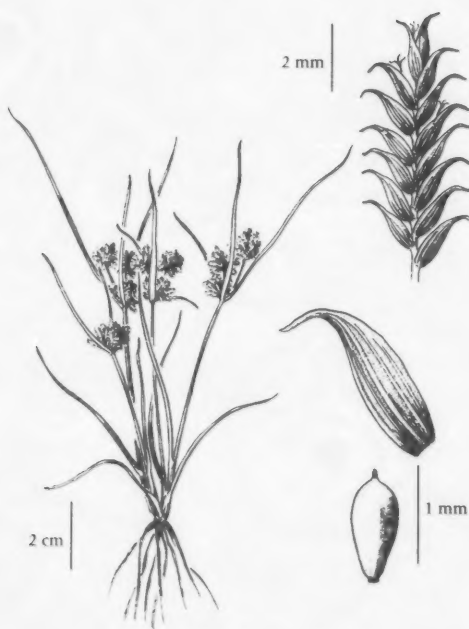
Leaves: Few, all near the bases; blades mostly 0.5-2 (2.5) mm wide, about as long as the stem.

Flowers: Inflorescence of dense, more or less short head-like clusters, the terminal unstalked, the others (if present) on slender rays up to 3 cm long, each cluster with dense spikes, the spikelets 6- to 20-flowered, rarely more, 4-10 mm long, 1-2 mm wide, flattened; involucre bracts 2 to 4, elongate, 1-15 cm long, some or all of them much surpassing the inflorescence.

Fruits: Scales evidently (5-) 7- to 9-nerved, lanceolate to egg-shaped, loose, green, turning brown at maturity, not closely appressed, 1-1.7 mm long excluding the recurved, slender awn-tips, these mostly 0.3-1 mm long; rachillas not winged, persistent, the scales falling from them at maturity; stamens solitary; achenes 3-angled, 0.6-1 mm long.



Cyperus esculentus var. *leptostachyus*



Cyperus squarrosus

DULICHIMUM

Dulichium arundinaceum (L.) Britt.

three-way sedge

HABITAT/RANGE:

Wet meadows, lakeshores and streamsides in the lowland, steppe and montane zones; frequent in SW BC, rare in SC BC; E to NF and S to FL, MS, TX, WY, ID and CA.

DESCRIPTION:

General: Perennial herb from deep-seated rhizomes; stems erect, arising singly, 30-100 cm tall.

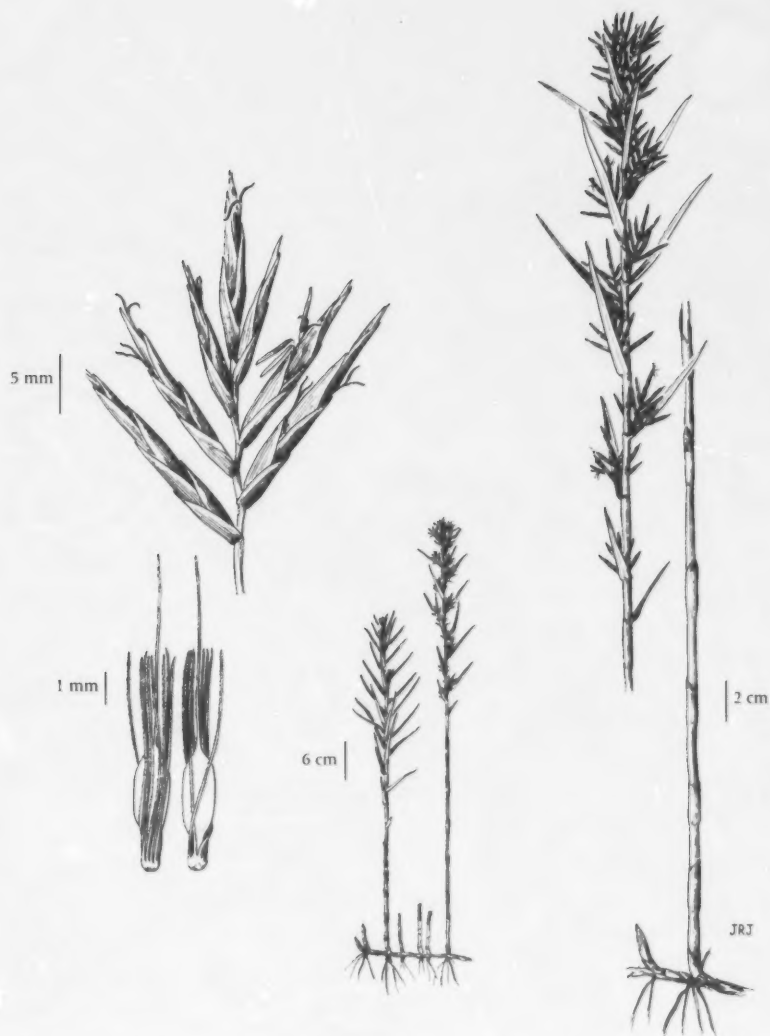
Leaves: Numerous, well-developed, along the stem, the uppermost 3-ranked; upper sheaths often overlapping; blades firm, flat, 4-15 cm long, 2.5-8 mm wide, the lower bladeless.

Flowers: Inflorescence elongate with numerous, axillary spikes emerging from leaf sheaths, the stalks more or less exserted, the internodes of the axis of the inflorescence about 2 mm long, the spikelets 2-ranked, 7 to 10, 1-2.5 cm long, slender, about 2 mm wide or less; stamens 3; stigmas 2-cleft; bracts 2-ranked, 3-8 mm wide, strongly veined, the tips short-pointed, the margins translucent.

Fruits: Scales several-nerved, narrow, pointed or long-pointed, 5-8 mm long, rachilla easily disarticulating at maturity; perianth bristles brownish, 5 to 8, more or less 3-8 mm long, with reflexed barbs, persistent; achenes narrowly ellipsoid, more or less flat, yellow, mostly 2.5-3 mm long excluding the short (to 1 mm long) stalks, beaked by the persistent, undivided portion of the styles, surpassed by the perianth bristles.

ELEOCHARIS

1. Stigmas 3; achenes 3-sided to nearly circular in outline, tapered.
 2. Tubercles nosecone-like, not forming distinct apical caps on the achenes.
 3. Spikes (5) 8-13 mm long, (5) 10- to 20 (25)-flowered, spindle-shaped; plants (20) 40-150 cm tall *E. rostellata*
 3. Spikes 2-8 mm long, usually 2- to 9-flowered, egg-shaped; plants 2-30 (40) cm tall.
 4. Plants 2-6 (10) cm tall; lowest scale not subtending a flower; plants coastal *E. parvula*
 4. Plants (5) 10-30 (40) cm tall; lowest scale subtending a flower; plants not coastal *E. quinqueflora*
 2. Tubercles forming distinct apical caps on the achenes.
 5. Achenes white to pale grey or pale yellow, longitudinally 8- to 10-ribbed, the ribs connected by strong cross-ridges; scales usually with green or straw-coloured midribs, the lowest one subtending a flower *E. acicularis*
 5. Achenes yellow or golden, 3-ribbed, the surfaces finely cellular-roughened; scales dark with pale and translucent margins, the lowest one usually not subtending a flower *E. tenuis*
1. Stigmas 2; achenes lens-shaped (rarely 3-cleft in *E. obtusa*).
 6. Achenes 1.3-2.5 mm long (tubercle included); scales 2-5.5 mm long; plants rhizomatous perennials.
 7. Tubercles egg-shaped; spikes with a single basal scale encircling the top of the stem *E. kamtschatica*
 7. Tubercles pyramidal; spikes with 2 or 3 basal scales encircling the top of the stem *E. palustris*
 6. Achenes 0.5-1.5 mm long; scales 1-2.5 mm long; plants annuals.
 8. Achenes black to cherry-red, 0.5-0.6 mm long, the perianth bristles more or less finely-barbed and subequal to the achenes *E. atropurpurea*
 8. Achenes straw-coloured to dark brown, (0.8) 1-1.5 mm long, the perianth bristles with conspicuous fine barbs directed backwards and equal to or exceeding the achenes *E. obtusa*

*Dulichium arundinaceum*

Eleocharis acicularis* (L.) Roem. & J.A. Schult.*needle spike-rush****HABITAT/RANGE:**

Marshes, mud flats and shorelines in the lowland, steppe and montane zones; frequent in S BC, infrequent northward; circumpolar, N to AK, YT and NT, E to NF and S to FL, MS, TX, NM, AZ, CA and MX; Greenland, Eurasia.

DESCRIPTION:

General: Perennial, usually densely tufted herb from slender rhizomes, forming dense mats; stems thread-like, erect to ascending, 3-12 cm tall.

Leaves: Sheaths pale, sometimes purplish below; blades lacking.

Flowers: Spikes solitary, terminal, flattened, linear to egg-shaped, 2.5-7 mm long, 3- to 15-flowered.

Fruits: Scales 1.5-2.2 mm long, egg-shaped to lanceolate, sharp-pointed or blunt, reddish-brown to brownish with translucent margins and greenish or straw-coloured midribs, the lowest one subtending a flower; perianth bristles 3 or 4, equalling or surpassing the achenes, rarely reduced or lacking; stigmas 3; achenes egg-shaped, more or less 3-angled, white to pale grey or pale yellow, longitudinally 8- to 10-ribbed, the ribs connected by strong cross-ridges, 0.7-1.1 mm long including the more or less conic-triangular tubercles.

Eleocharis atropurpurea* (Retz.) J. & K. Presl*purple spike-rush****HABITAT/RANGE:**

Shallow water and moist lakeshores in the steppe zone; rare in SC BC, known only from Osoyoos Lake; pantropical, disjunct S to NC, FL, LA, TX, NM and CA; Eurasia, Africa, S America.

DESCRIPTION:

General: Annual, tufted herb from fibrous roots; stems slender, widely spreading or ascending, 3-15 cm tall.

Leaves: Sheaths firm, oblique at the tops; blades lacking.

Flowers: Spikes solitary, terminal, egg-shaped, 2-7 mm long, many-flowered.

Fruits: Scales 1-1.5 mm long, closely overlapping like shingles, egg-shaped, blunt, with brown or purplish margins and broad, green or straw-coloured midribs; perianth bristles lacking or if present, mostly shorter or nearly equal to the achenes, more or less finely-barbed, whitish; stigmas 2; achenes lens-shaped, black to cherry-red, shining, smooth, 0.5-0.6 mm long including the minute, pale tubercles.

Eleocharis kamtschatica* (C.A. Mey.) Komarov*Kamchatka spike-rush****HABITAT/RANGE:**

Marshes, wet meadows and bog margins in the lowland zone; rare on N Vancouver Island, N Queen Charlotte Islands and adjacent N coast; amphiberian, N to AK and disjunct to ON, PQ and NF; E Asia.

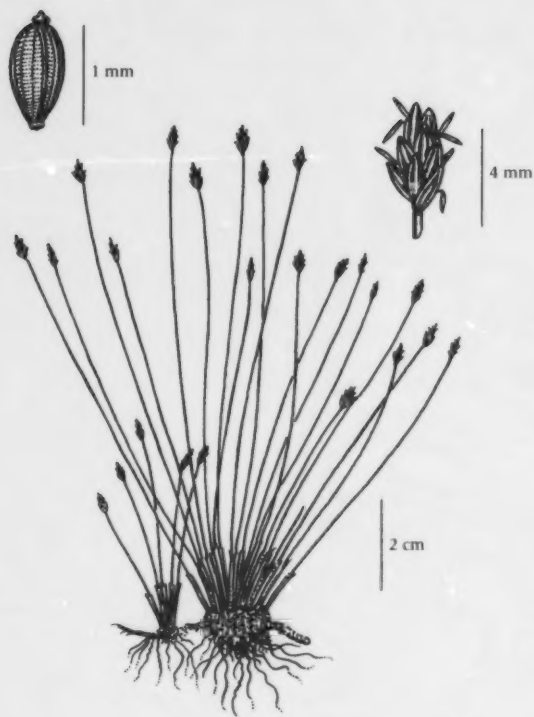
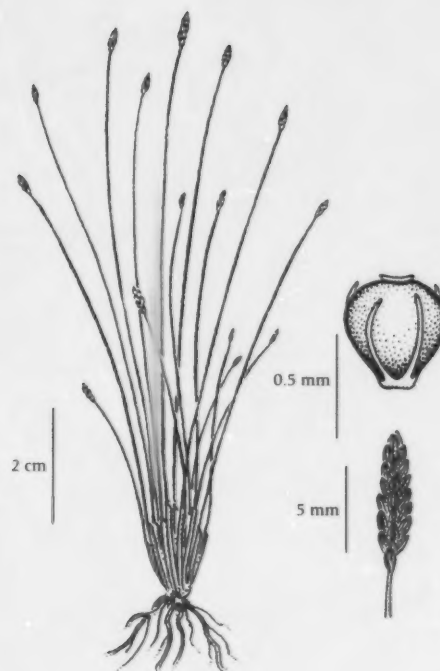
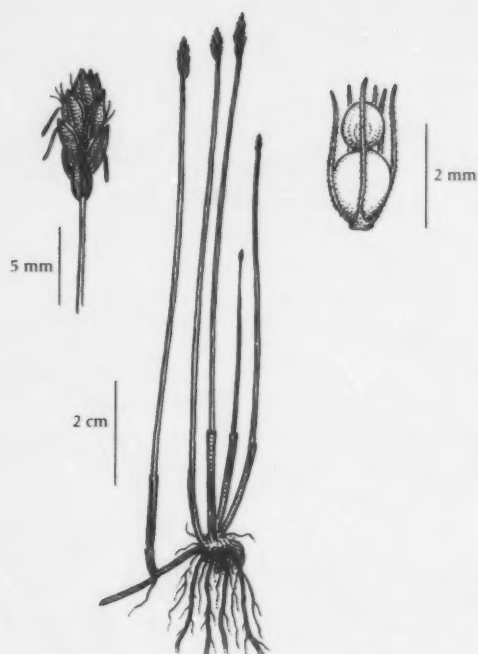
DESCRIPTION:

General: Perennial, tufted herb from inconspicuous rhizomes and fibrous roots; stems 10-40 cm tall.

Leaves: Sheaths purplish below, somewhat flaring upwards; blades lacking.

Flowers: Spikes solitary, terminal, flattened, linear to egg-shaped, subtended by a single basal bract almost or quite encircling the top of the stem, 0.5-1.4 cm long, several-flowered.

Fruits: Scales 3.5-5.5 mm long, purplish-black to purplish-brown with translucent margins and lighter midribs; perianth bristles 4 to 6; stigmas 2; achenes lens-shaped, 1.3-1.8 mm long, pitted, the pits in longitudinal rows, the tubercles egg-shaped, slightly smaller than the achenes and about as wide.

*Eleocharis acicularis**Eleocharis atropurpurea**Eleocharis kamtschatica*

Eleocharis obtusa Willd. Schult. (*E. ovata* auct. non [Roth] Roem. & J.A. Schult.)

blunt spike-rush; egg-shaped spike-rush

HABITAT/RANGE:

Marshes, mud flats and wet meadows in the lowland and montane zones; frequent in SW BC, rare in the Queen Charlotte Islands, SC and SE BC; circumpolar, disjunct E to ON, PQ and NS and S to MA, PA, IN, MO and OR; Eurasia.

DESCRIPTION:

General: Annual (rarely perennial), tufted herb from fibrous roots; stems usually erect, several- to many-ribbed, 5-50 cm tall.

Leaves: Sheaths firm, blunt; blades lacking.

Flowers: Spikes solitary, terminal, egg-shaped, (2) 5-13 mm long, many-flowered (rarely less than 40).

Fruits: Scales 1.7-2.5 mm long, egg-shaped to nearly circular, the lowest ones sometimes empty, purplish or brownish with pale, translucent margins and greenish midribs; perianth bristles mostly 6 or 7, equalling or surpassing the achenes, or reduced or lacking, with fine barbs directed backwards, brownish; stigmas 2 or sometimes 3; achenes lens-shaped, straw-coloured to dark brown, smooth and shiny, (0.8) 1-1.5 mm long including the flattened, broad-based tubercles, which are appressed to the summits of the achenes, 1/2 to as wide as the achenes, and up to 1/2 as long as them.

Eleocharis palustris (L.) Roem. & J.A. Schult. (*E. macrostachya* Britt., *E. uniglumis* [Link] J.A. Schult.)

common spike-rush; creeping spike-rush

HABITAT/RANGE:

Wet meadows, tidal flats, ditches and shorelines in the lowland, steppe and montane zones; common throughout BC; circumpolar, N to AK, YT and NT, E to NF and S to SC, AL, LA, TX, NM, AZ, CA and MX; Greenland, Eurasia.

DESCRIPTION:

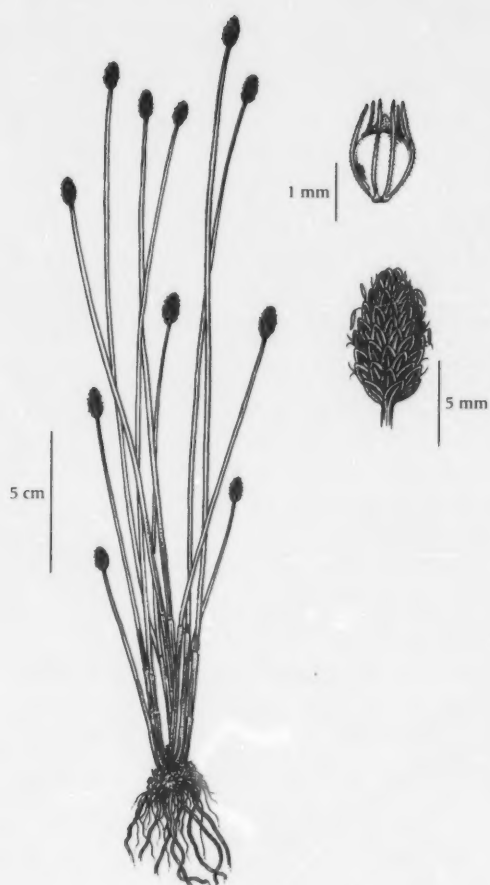
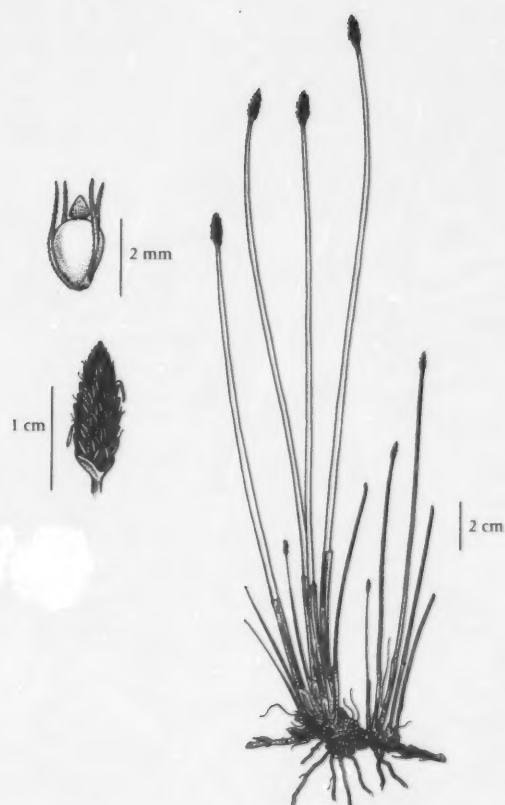
General: Perennial herb from freely branching rhizomes; stems scattered or in small clusters, slender to very stout, circular in cross-section, tapered or somewhat flattened, 10-100 cm tall.

Leaves: Sheaths firm, reddish-brown, distinctly oblique, purplish or reddish below, somewhat flaring upwards; blades lacking.

Flowers: Spikes solitary, terminal, lanceolate or narrowly egg-shaped, 5-23 mm long, light to dark brown or chestnut, several-flowered.

Fruits: Basal scales 1 or 2 (3), empty, the lowest ones nearly encircling the top of the stem; fertile scales mostly 2-4.5 mm long, egg-shaped, nearly sharp-pointed or blunt, reddish-brown or purplish-brown or less purplish-black with translucent margins and lighter coloured midribs; perianth bristles 4, sometimes 5 or 6, shortly surpassing the achenes, rarely reduced or lacking, with fine barbs directed backwards; stigmas 2; achenes lens-shaped, yellow to medium brown, finely cellular roughened, spongy, minutely wrinkled, 1.5-2.5 mm long including the well-differentiated tubercles, the tubercles separated from the achenes by constrictions, pyramidal, bulbous, longer than broad, 0.4-0.7 mm long.

Notes: This is a highly variable polyploid complex which has yet to be studied adequately.

*Eleocharis obtusa**Eleocharis palustris*

Eleocharis parvula* (Roem. & J.A. Schult.) Link ex Bluff, Nees & Schauer*small spike-rush****HABITAT/RANGE:**

Salt marshes, mudflats and sandy shores along the coast; rare on S Vancouver Island, the Queen Charlotte Islands, and in the lower mainland; circumpolar, E to NF and S to FL, MS, TX, NM, AZ, CA and MX, Atlantic Coast; Europe.

DESCRIPTION:

General: Perennial herb from inconspicuous, slender rhizomes, forming dense mats; stems thread-like, erect to ascending, 2-6 (10) cm tall.

Leaves: Sheaths pale, sometimes purplish below; blades lacking.

Flowers: Spikes solitary, terminal, 2-4.5 (6) mm long, 2- to 9- (20-) flowered, egg-shaped.

Fruits: Scales 1.5-2 (2.5) mm long, the lowest one empty, not subtending the flowers, egg-shaped, blunt or sharp-pointed, green to straw-coloured or brown; perianth bristles 3 to 5, equalling or surpassing the achenes, rarely reduced or lacking; stigmas 3; achenes egg-shaped, more or less 3-angled, straw-coloured, smooth and shining, 0.9-1.3 mm long including the short, inconspicuous tubercles, which are 0.15-0.3 mm long, nosecone-like and not forming apical caps on the achenes.

Eleocharis quinqueflora* (Hartm.) Schwarz (*E. pauciflora* [Lightf.] Link, *E. quinqueflora* ssp. *fernaldii* [Svens.] Hult.)*few-flowered spike-rush****HABITAT/RANGE:**

Bog margins and wet (often calcareous) sites in the steppe and montane zones (rarely subalpine or alpine); infrequent in and E of the Coast-Cascade Mountains in S BC, rare northward; circumpolar, N to AK, YT and NT, E to NF and S to ME, PA, OH, IN, IL, NE, NM, AZ, CA and MX; Greenland, Eurasia.

DESCRIPTION:

General: Perennial herb from short, stout rhizomes, also producing more elongate, slender stolons with thickened terminal buds; stems clustered, thread-like, grooved, (5) 10-30 (40) cm tall.

Leaves: Sheaths brownish to straw-coloured below, cylindrical, not flaring upwards; blades lacking.

Flowers: Spikes solitary, terminal, lanceolate to egg-shaped, 4-8 mm long, 3- to 9-flowered, somewhat flattened.

Fruits: Scales 2.5-5.5 mm long, the two lower ones larger than the others, the lowest one subtending a flower, egg-shaped, blunt, dark brown with translucent margins and a lighter midrib; perianth bristles 4 to 6, equalling or surpassing the achenes, or more or less reduced; stigmas 3; achenes 3-angled, or plano-convex, equally or unequally 3-angled, greyish brown, 3-ribbed, cellular roughened, 1.9-2.6 mm long including the short (0.6 mm), barely differentiated, nosecone-like tubercles that are confluent with the bodies of the achenes and that do not form distinct apical caps on the achenes.

Eleocharis rostellata* (Torr.) Torr. (*E. quinqueflora* [Hartm.] Schwarz ssp. *suksdorfiana* [Beauv.] Hult., *E. suksdorfiana* Beauv.)*beaked spike-rush****HABITAT/RANGE:**

Salt marshes, hot springs and alkaline or saline ponds in the lowland and steppe zones; rare in S BC; disjunct E to ON and NS and S to MA, NJ, FL, TX, NM, AZ and CA; S America.

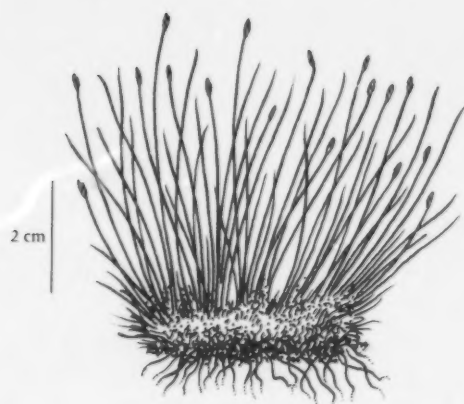
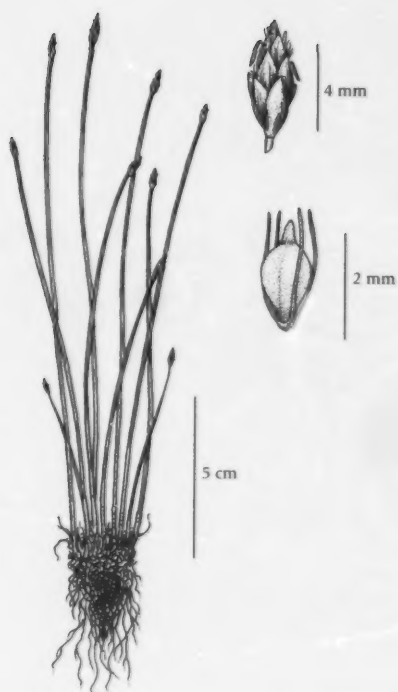
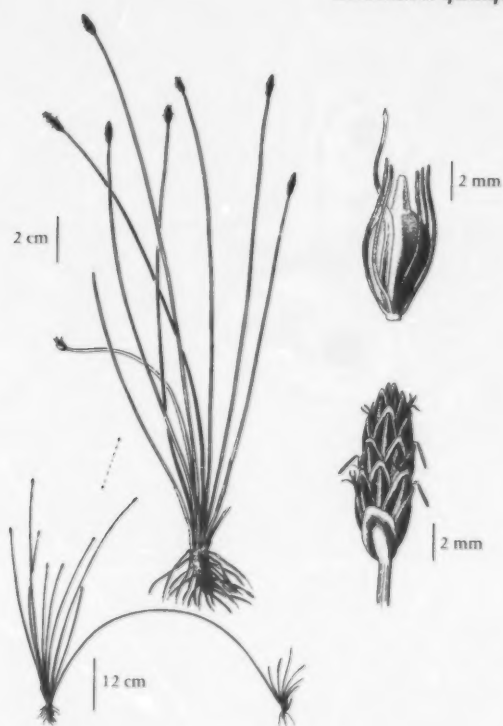
DESCRIPTION:

General: Perennial herb from short, stout, often ascending or nearly vertical rhizomes; stems clustered, more or less flattened, at least near the tops, some of them elongating, arching, then rooting from apical bulbils, (2) 40-100 cm tall.

Leaves: Blades lacking.

Flowers: Spikes solitary, terminal, spindle-shaped, (5) 8-13 mm long, (5) 10- to 20- (25-) flowered.

Fruits: Scales firm, egg-shaped, blunt, or the upper sharp-pointed, with translucent margins, equalling or surpassing the achenes; perianth bristles about equalling the achenes, with sharp teeth directed backwards; stigmas 3; achenes egg-shaped, rounded and 3-angled to plano-convex, light greenish to medium brown, smooth and shining or slightly cellular roughened, 1.9-2.8 mm long including the prominent, pale, nosecone-like tubercles, which are up to 0.75 mm long and do not form distinct apical caps on the achenes.

*Eleocharis parvula**Eleocharis quinqueflora**Eleocharis rostellata*

Eleocharis tenuis (Willd.) J.A. Schult. (*E. compressa* Sullivant, *E. elliptica* Kunth, *E. nitida* Fern. var. *borealis* [Svens.] Gleason)

slender spike-rush

HABITAT/RANGE:

Lakeshores, streamsides and wet meadows in the steppe and montane zones; rare in S BC east of the Coast-Cascade Mountains and N of 50° N; N to SW AK, E to NF and S to ME, MA, NC, GA, MS, TX, NM, ID and WA.

DESCRIPTION:

General: Perennial, tufted herb from thick, creeping rhizomes; stems slender, scattered or loosely clustered, 6- to 8-angled with a vascular bundle under each angle, 5-40 cm tall.

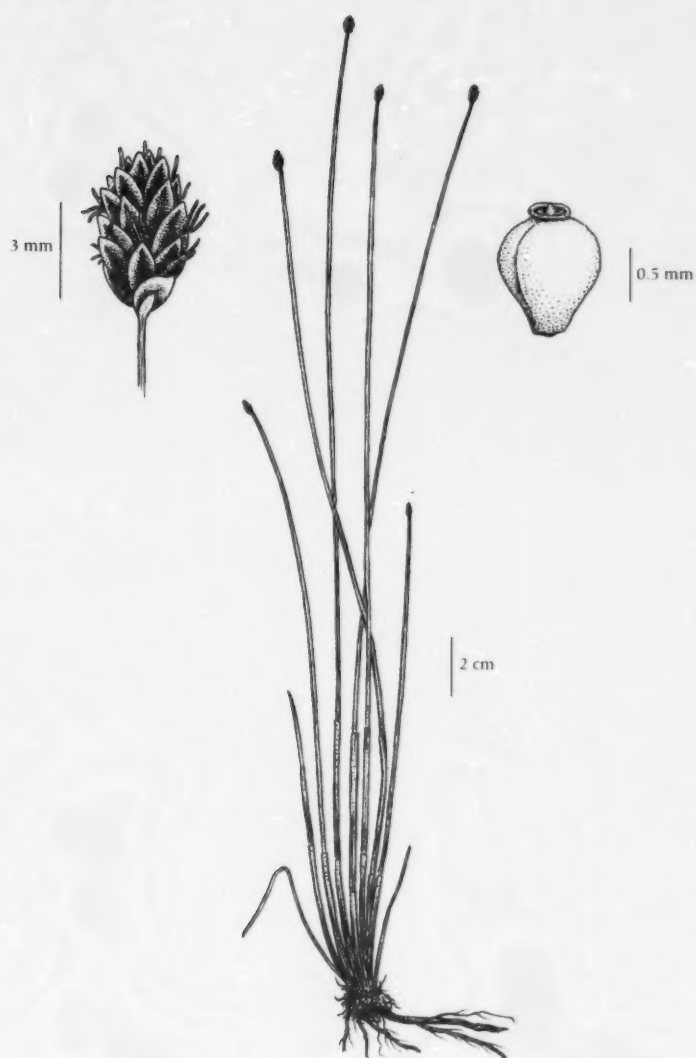
Leaves: Sheaths conspicuously reddish-purple toward the bases, blunt-tipped; blades lacking.

Flowers: Spikes solitary, terminal, egg-shaped, 3-10 mm long, 10- to 30-flowered.

Fruits: Outermost scale relatively large and broad, globe-shaped, usually with firm, often greenish areas toward the bases on the midribs, the other scales narrower, usually 2-3 mm long, mostly dark except for the pale, translucent tips, the lowest scale usually not subtending a flower; perianth bristles much reduced or lacking, if present, 2 to 4, 1/2 as long as the achenes; stigmas 3; achenes egg-shaped, unequally 3-angled with broad inner faces and blunt outer angles, golden yellow, minutely cellular-roughened and net-veined, 3-ribbed, often persistent after the scales have fallen, (0.7) 1-1.5 mm long including the usually well-defined, depressed tubercles with abruptly sharp-pointed centres.

ERIOPHORUM

1. Spikes 2 or more, subtended by one or more leaflike involucre bracts.
 2. Leaves narrow, elongate, folded or triangular in cross-section; involucre bracts solitary, shorter than the inflorescence *E. gracile*
 2. Leaves mostly flattened, except at the tips; involucre bracts 2 or more with the longest equalling or surpassing the inflorescence.
 3. Spikes crowded, the scales with several conspicuous ribs; perianth bristles orange-brown or coppery *E. virginicum*
 3. Spikes loosely aggregated, the scales with single ribs; perianth bristles creamy-white to tawny.
 4. Midribs of scales extending to the tips; sheaths green *E. viridicarinatum*
 4. Midribs of scales not extending to the tips; sheaths blackish *E. angustifolium*
1. Spikes solitary, not subtended by leaflike involucre bracts.
 5. Plants rhizomatous or stoloniferous, usually with solitary stems *E. scheuchzeri*
 5. Plants without stolons or rhizomes, densely tufted.
 6. Scales with broad, pale margins, the basal ones reflexed *E. vaginatum*
 6. Scales without pale margins, the basal ones not reflexed.
 7. Perianth bristles pure white with a silky sheen; plants 6-25 cm tall *E. callitrix*
 7. Perianth bristles cream-coloured or yellow-tinged; plants 30-60 cm tall *E. brachyantherum*

*Eleocharis tenuis*

Eriophorum angustifolium Honck. (*E. angustifolium* ssp. *scabriusculum* Hult., ssp. *subarcticum* [Vassiljev] Hult. ex Kartesz & Gandhi and ssp. *triste* [Fries] Hult.)

narrow-leaved cotton-grass

HABITAT/RANGE:

Bogs, fens, marshes, shorelines and wet meadows in all vegetation zones; common throughout BC; circumpolar, N to AK, YT and NT, E to NF and S to NH, NC, TN, IO, NE, NM, ID and OR; Eurasia.

DESCRIPTION:

General: Perennial herb from creeping rhizomes; stems 10-90 cm tall.

Leaves: Sheaths brownish to purplish or blackish, persistent; blades 2-6 (8) mm wide, flat but becoming narrow and folded toward the tips, the uppermost ones equalling or exceeding the sheaths.

Flowers: Spikes 2 to 10, terminal, erect, at least some of them pendulous, egg-shaped and 1-2 cm long in flower, 2-4 cm long in fruit; anthers 2.5-4 mm long; involucre bracts several, unequal, 2 or more of them evidently leaflike, the longest ones equalling or surpassing the inflorescence.

Fruits: Scales brownish or blackish-green, egg-shaped to lanceolate, appressed to ascending, 1-ribbed, pointed, the slender midribs not reaching the tips; perianth bristles numerous, whitish, creamy-white to tawny, many times longer than the achenes; achenes blackish, 2-3 mm long, broadly lanceolate to egg-shaped.

Eriophorum brachyantherum Trautv. & C.A. Mey.

short-anthered cotton-grass

HABITAT/RANGE:

Bogs, fens and wet (often calcareous) meadows in the montane to alpine zones; common in BC north of 52° N and in and E of the Coast-Cascade Mountains; circumboreal, N to AK, YT and NT and E to NF; Eurasia.

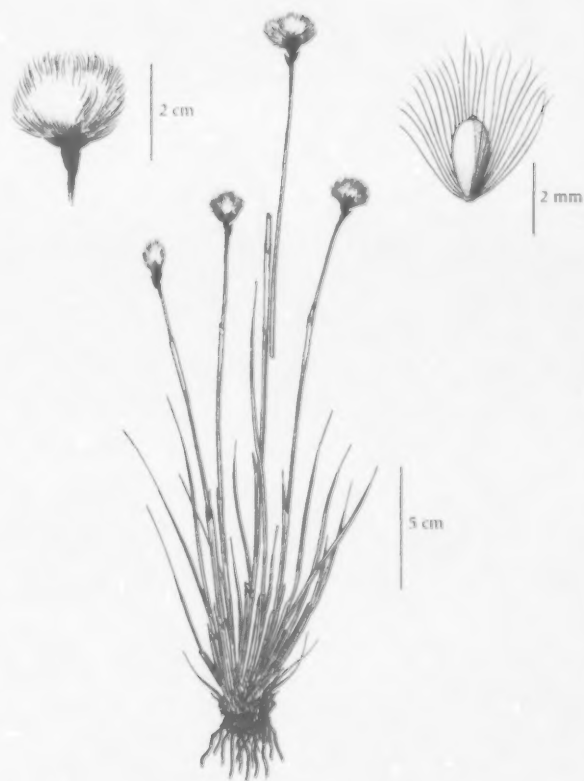
DESCRIPTION:

General: Perennial, densely tufted herb from fibrous roots; stems 30-60 cm tall.

Leaves: Basal sheaths brownish, cross-wrinkled, persistent, not or only slightly expanded upwards, 2 of which with reduced or abortive blades generally borne above the basal cluster of leaves; blades about 1 mm wide or less, 1/2 as long to nearly as long as the stem, elongate, narrow, folded, the lower leaves with short blades less than 2 mm wide, the upper ones above the middle of the stem.

Flowers: Spikes solitary, terminal, erect, egg-shaped and 1-2 cm long in flower, egg-shaped to nearly globe-shaped and 2-4 cm long in fruit; anthers short, up to about 1 mm long; involucre bracts lacking.

Fruits: Scales of uniform colour, at least in the exposed portions, blackish-green, narrowly lanceolate, appressed to ascending, gradually tapering to slender tips, the midribs not reaching the tips, the sterile scales 10 to 15, below the fertile ones and appearing to gradually taper to the bases, or the sterile scales fewer and the spikes broader based, the lowermost scales 0.5-1 cm long, not reflexed; perianth bristles numerous, cream-coloured or yellow-tinged, surpassing the achenes; achenes brown, a little over 2 mm long, egg-shaped, sometimes narrowly so, somewhat sharp-pointed.

*Eriophorum angustifolium**Eriophorum brachyantherum*

Eriophorum callitrix Cham. ex C.A. Mey.

arctic cotton-grass

HABITAT/RANGE:

Bogs, fens and wet to mesic, often calcareous meadows in the montane to alpine zones; infrequent in BC north of 57° N and E of the Coast-Cascade Mountains; amphiberingian, N to AK, YT and NT, E to NF and S to WY; Greenland, E Asia.

DESCRIPTION:

General: Perennial tufted herb, from small, solitary, compact tufts; stems stiff, slender, 6-25 cm tall.

Leaves: Basal sheaths, brownish, cross-wrinkled, persistent, expanded upwards; blades 0.4-1.2 mm wide, stiff, thread-like, folded throughout, the stem leaves usually lacking or solitary, located below the middle of the stem.

Flowers: Spikes solitary, terminal, erect, at least some of them pendulous, usually broadly tapering towards the bases, erect, egg-shaped or nearly globe-shaped and 1-1.5 cm long in flower, and 2-2.5 cm long in fruit; anthers 0.6-1 mm long; involucre bracts lacking.

Fruits: Scales blackish or yellowish, lanceolate, appressed to ascending, gradually tapering to slender tips, the midribs not reaching the tips, the lowermost scales 0.5-0.8 cm long, the sterile scales 7 or more; perianth bristles numerous, pure white with a silky sheen, many times longer than the achenes; achenes blackish, ellipsoid, 1.8-2.1 mm long.

Eriophorum chamissonis C.A. Mey. (*E. altaicum* Meinsh. var. *neogaeum* Raymond, *E. russeolum* Fries ssp. *rufescens* [Anders.] Hyl. = var. *chamissonis*; *E. russeolum* var. *albidum* Nyl. = var. *albidum*)

Chamisso's cotton-grass

HABITAT/RANGE:

Bogs, streambanks, lakeshores and wet meadows in all vegetation zones; var. *chamissonis* – common throughout BC; var. *albidum* – infrequent in N BC, rare S to 51° N east of the Coast-Cascade Mountains; N to AK, YT and NT, E to NF and S to WI, MN, ND, CO and OR.

DESCRIPTION:

General: Perennial herb from creeping rhizomes or stolons, extensively colonial; stem 20-75 cm tall.

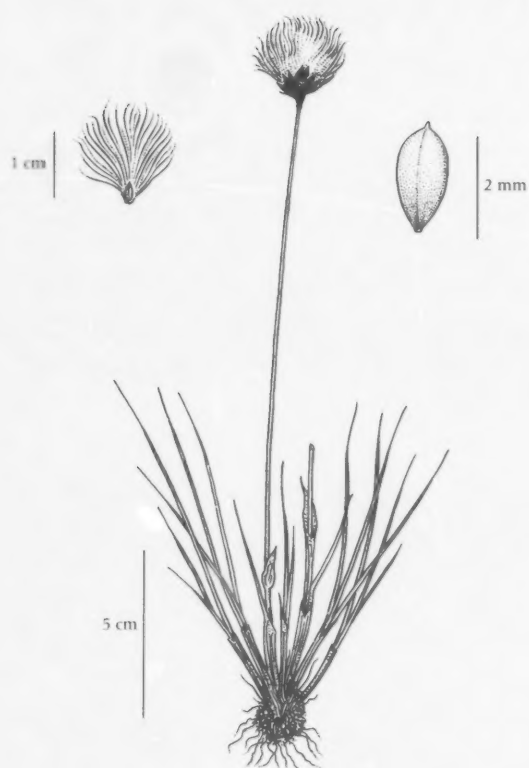
Leaves: Basal sheaths brown to purplish-brown, cross-wrinkled, persistent, not or only somewhat expanded upwards, the uppermost sheaths usually bladeless; stem leaves few, usually 1 to 3, located below the middle of the stems, mostly borne near the bases, rarely one above; blades 0.4-2 mm wide, short to elongate, thread-like, folded throughout or triangular in cross-section.

Flowers: Spikes solitary, terminal, erect, at least some of them pendulous, appearing broad-based, egg-shaped-cylindrical and 1.5-2 cm long in flower, globe-shaped and 2-4 cm long in fruit; anthers mostly 1-3 (3.2) mm long; involucre bracts lacking.

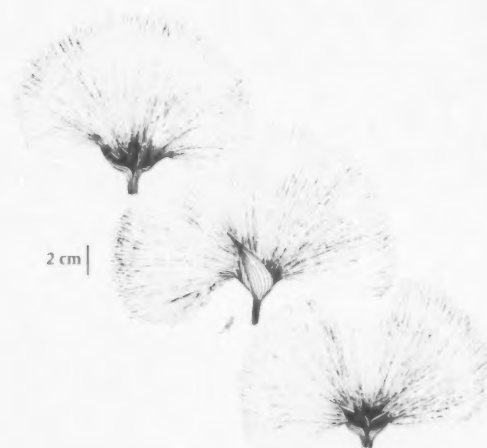
Fruits: Scales blackish to greyish, the middle scales lanceolate or broadly lanceolate, appressed to ascending, the midribs not reaching the tips, more or less long and sharp-pointed or blunt, with narrow, pale margins or broad translucent margins, the sterile scales few, not more than 7; perianth bristles numerous, rust-coloured or white to tawny, many times longer than the achenes; achenes dark, 1.7-2.7 mm long, egg-shaped, smooth or fringed with small serrated teeth along the margins near the prominent stylar tips.

Notes: Two, sometimes difficult to separate, varieties occur in BC:

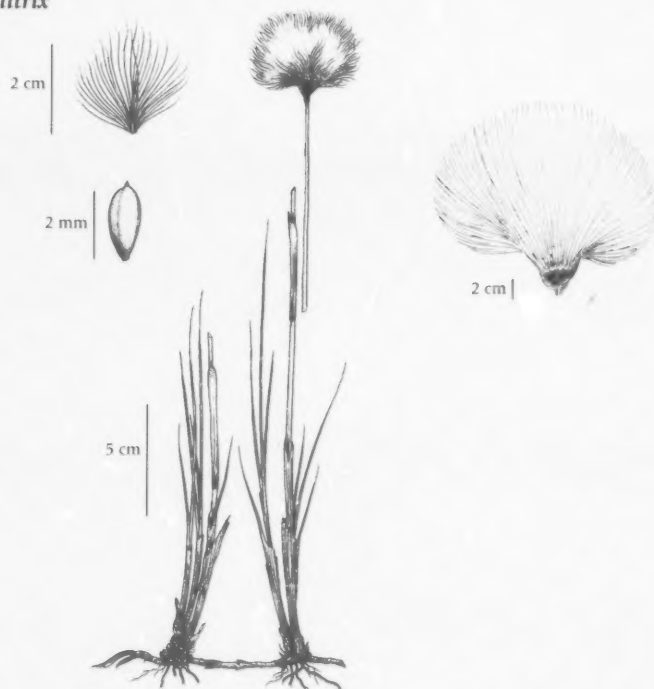
1. Perianth bristles rust-coloured; plants stout, the stems over 1.5 mm wide at the bases; middle scales lanceolate, more or less long-pointed, with narrow, pale margins var. *chamissonis*
1. Perianth bristles white to tawny; plants slender, the stems less than 1.5 mm wide at the bases; middle scales broadly lanceolate, blunt, with broad translucent margins var. *albidum* (Nyl.) Fern



Eriophorum callitrix



Eriophorum chamissonis var. *albidum*



Eriophorum chamissonis var. *chamissonis*

Eriophorum gracile Koch
slender cotton-grass

HABITAT/RANGE:

Bogs, marshes and lakeshores in the lowland, steppe and montane zones; infrequent in BC, absent from NW BC, Queen Charlotte Islands and Vancouver Island; circumpolar, N to AK and NT, E to NF and S to ME, MA, PA, IN, IL, IA, NE, CO, ID and CA; Eurasia.

DESCRIPTION:

General: Perennial, loosely tufted or turf-forming herb from slender, much-branched rhizomes; stems arising singly, slender, triangular in cross-section, at least above, (15) 20-60 cm tall.

Leaves: Basal sheaths brownish to reddish-brown, cross-wrinkled, persistent, lacking young basal leaves at flowering time; leaves basal or stem, shorter than the stem, the stem leaves 2 or 3; blades 0.8-1.5 (2) mm wide, elongate, narrow and folded towards the tips or triangular in cross-section, the uppermost leaves with reduced blades usually shorter than the well-developed sheaths.

Flowers: Spikes 2 to 8, terminal, erect, in compact to open, umbrella-like cymes, the stalks slender, unequal, circular in cross-section, tapered, not evidently compressed, minutely stiff short-hairy, egg-shaped and 0.5-1 cm long in flower, 1.5-2 (2.5) cm long in fruit; anthers mostly 1-3 mm long; involucre bracts several but only one of them: evidently green and leaflike, usually shorter than the inflorescence, not purplish basally.

Fruits: Scales blackish-green to greenish-brown or greyish, egg-shaped to lanceolate, appressed to ascending, the slender midribs not reaching the tips, blunt; perianth bristles numerous, white or whitish, many times longer than the achenes; achenes straw-coloured or light brown, 2.5-3.5 mm long, narrowly egg-shaped to narrowly lanceolate.

Eriophorum scheuchzeri Hoppe
Scheuchzer's cotton-grass

HABITAT/RANGE:

Marshes, lakeshores and wet meadows in the montane to alpine zones; frequent in N BC, rare in S BC east of the Coast-Cascade Mountains; N to AK, YT and NT, E to NF and S to WY and UT; Eurasia.

DESCRIPTION:

General: Perennial herb from creeping rhizomes, extensively colonial; stems mostly solitary, 10-50 cm tall.

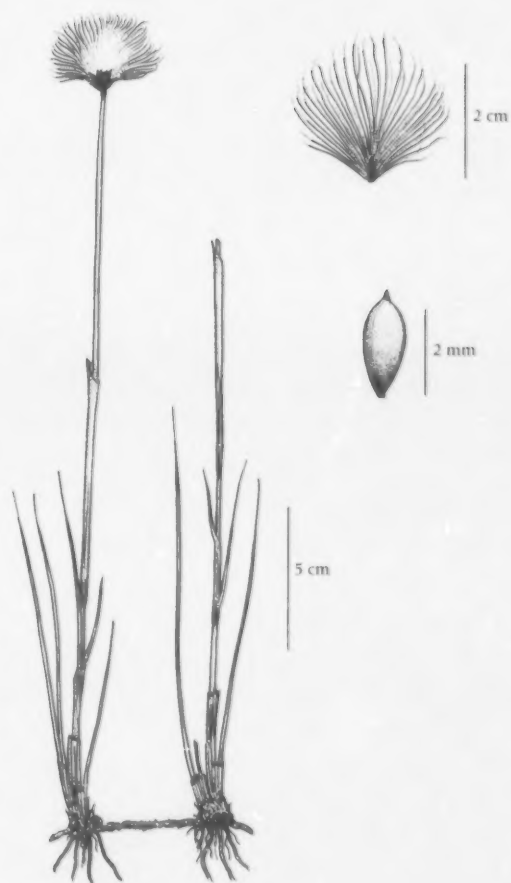
Leaves: Sheaths brownish to reddish, cross-wrinkled, persistent, slightly expanded upwards, the uppermost dark-tipped and bladeless, basal leaves few; stem leaves 1 (2), borne below the middle of the stem; blades often much reduced, 0.5-1.3 mm wide, slender, folded or triangular in cross-section.

Flowers: Spikes solitary, terminal, erect, nearly globe-shaped to egg-shaped or cylindrical, 0.8-2 cm long in flower, 1.8-4 cm long in fruit; anthers mostly 0.5-1 mm long; involucre bracts lacking.

Fruits: Scales entirely blackish-green towards the top 1/2 or 2/3 or sometimes, very narrowly and inconspicuously pale-margined at the tips, narrowly egg-shaped, appressed to ascending, long-pointed, the midribs not reaching the tips, the sterile scales mostly less than 7; perianth bristles numerous, white or nearly white, many times longer than the achenes; achenes brown or blackish, 1.7-2.3 mm long, broadly egg-shaped with prominent stylar tips.



Eriophorum gracile



Eriophorum scheuchzeri

Eriophorum vaginatum L. ssp. *vaginatum* (*E. vaginatum* L. ssp. *spissum* [Fern.] Hult.)
sheathed cotton-grass

HABITAT/RANGE:

Bogs, marshes and wet meadows in the montane to alpine zones; rare N of 52° N in BC; circumpolar, N to AK, YT and NT and E to SK; Eurasia.

DESCRIPTION:

General: Perennial, tufted herb forming tussocks; stems 10-60 cm tall.

Leaves: Basal sheaths brownish, cross-wrinkled, persistent; stem leaves 1 to 3, the sheaths conspicuously expanded upwards; blades 0.5-1.2 mm wide, folded.

Flowers: Spikes solitary, terminal, erect, egg-shaped to nearly globe-shaped and 1-2 cm long in flower, nearly globe-shaped and 1.7-4 cm long in fruit; anthers 1-2 mm long; involucre bracts lacking.

Fruits: Scales greyish to blackish, with broad pale margins, narrowly egg-shaped to long-pointed, appressed to ascending, gradually tapering near the tips, the midribs not reaching the tips, at least the lower ones reflexed, the sterile scales mostly 10 or more; perianth bristles numerous, whitish, many times longer than the achenes; achenes 1.9-2.8 mm, (3.5) mm long, not fringed with small serrated teeth.

Eriophorum virginicum L.
tawny cotton-grass

HABITAT/RANGE:

Bogs and wet ditches in the lowland zone; rare in SW BC, known only from the Fraser River delta; introduced from E North America.

DESCRIPTION:

General: Perennial herb from rhizomes; stems solitary or few together, stiff, erect, up to 100 cm tall.

Leaves: Sheaths brownish to purplish, persistent; blades 2-4 mm wide, flat, except at the tips.

Flowers: Spikes several, terminal, in crowded clusters, the stalks short and nearly equal; anthers 1-1.5 mm long; involucre bracts 2 (3), unequal, leaflike, the longest greatly surpassing the inflorescence.

Fruits: Scales coppery or brown, blunt or pointed, the midribs prominently 3- to 5-nerved; perianth bristles numerous, tawny or coppery, many times longer than the achenes; achenes 3-3.5 mm long, a third as wide.

Eriophorum viridicarinatum (Engelm.) Fern. (*E. polystachion* L. var. *viridicarinatum* Engelm.)
green-keeled cotton-grass

HABITAT/RANGE:

Bogs, marshes and wet meadows in the montane to alpine zones; frequent in NW and E BC, infrequent in SC BC; N to AK and YT, E to NF and S to NY, IA, OH, MI, CO and ID.

DESCRIPTION:

General: Perennial herb from thin rhizomes; stems 30-100 cm tall.

Leaves: Mainly basal, flat except at the tips, stem leaves 2 or more; sheaths green, the basal, persistent ones brownish, cross-wrinkled; blades 2-6 mm wide, flat, except at the tips, the uppermost equalling or surpassing the sheaths.

Flowers: Spikes 4 to 10, terminal, loosely aggregated, usually stalked, the stalks pendulous, to 5 cm long, slender, rough, short-hairy, or rarely all unstalked, egg-shaped, 0.6-1 cm long in flower, 1.5-3 cm long in fruit; anthers 1-1.3 mm long; involucre bracts 2 to 3, green with light brown bases, usually the longest ones surpassing the inflorescence.

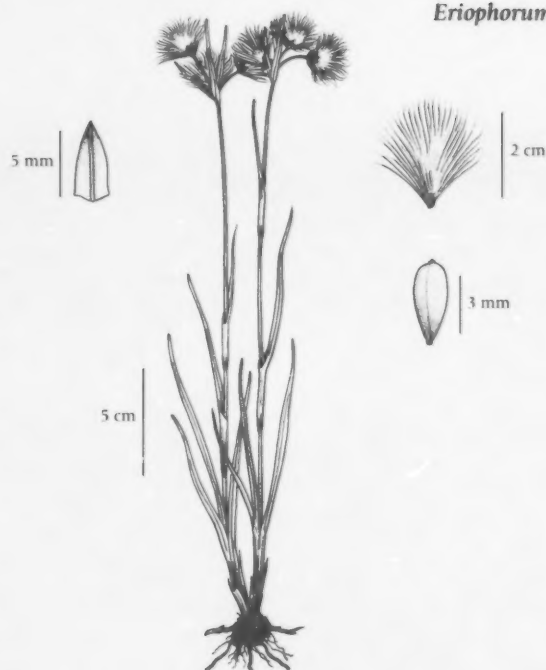
Fruits: Scales blackish-green, narrowly egg-shaped, appressed to ascending, 1-ribbed, blunt, the conspicuous, paler midribs expanded at, and extending to the tips; perianth bristles numerous, creamy-white to tawny, many times longer than the achenes; achenes narrowly egg-shaped, 3-4 mm long.



Eriophorum vaginatum ssp. *vaginatum*



Eriophorum virginicum



Eriophorum viridicarinarum

ISOLEPIS

1. Involucral bracts subequal to slightly surpassing the solitary spikes; achenes smooth, reddish-brown, dull *I. cernua*
1. Involucral bracts surpassing the clusters of 1 to 4 (10) spikes; achenes prominently longitudinally ribbed, brown or black, shiny *I. setacea*

Isolepis cernua (Vahl) Roem. & J.A. Schult. (*Scirpus cernuus* Vahl *pro parte*, *S. cernuus* var. *californicus* [Torr.] Beetle)
low clubrush

HABITAT/RANGE:

Marshes, tidal flats and beaches in the lowland zone; frequent in SW BC, rare northward along the coast; S to TX and CA; cosmopolitan, Eurasia, S America, Australia and New Zealand.

DESCRIPTION:

General: Annual, tufted herb; stems numerous, slender, 3-20 (35) cm tall.

Leaves: One to few near the bases, variously developed in different plants, sometimes with normal sheaths and blades; blades elongate, slender, up to as long as the stem, sometimes the lower ones reduced to scales, the uppermost ones with sheaths and very short blades.

Flowers: Spikes solitary, appearing terminal or subterminal, often set at an angle to the stems, several- to many-flowered, 2-5.5 mm long; involucral bracts solitary, conspicuous, appearing merely as enlarged scales with broad, blunt awn tips, about 1 mm long or leaf like and up to about 1 cm long, nearly equal to or surpassing the spikes.

Fruits: Scales numerous, often reddish-tinged, obscurely to evidently nerved with fine parallel lines mostly 1.2-2 mm long, the midribs tending to be enlarged, greenish or pale, often very shortly exserted as minute tips; perianth bristles lacking, but the filaments sometimes persisting and appearing like slender, flattened bristles; achenes broad, 3-angled, pale reddish-brown, dull, smooth, 1 mm long or less, with more or less abruptly, sharp-pointed tips.

Isolepis setacea L. R. Br. (*Schoenoplectus setaceus* [L.] Palla, *Scirpus setaceus* L.)
bristle clubrush

HABITAT/RANGE:

Disturbed sites in the lowland zone; rare in SW BC, known only from Victoria; introduced from Eurasia.

DESCRIPTION:

General: Annual or perennial, tufted herb; stems slender, circular in cross-section, tapered, 0.3-0.5 mm wide, 3-30 cm tall.

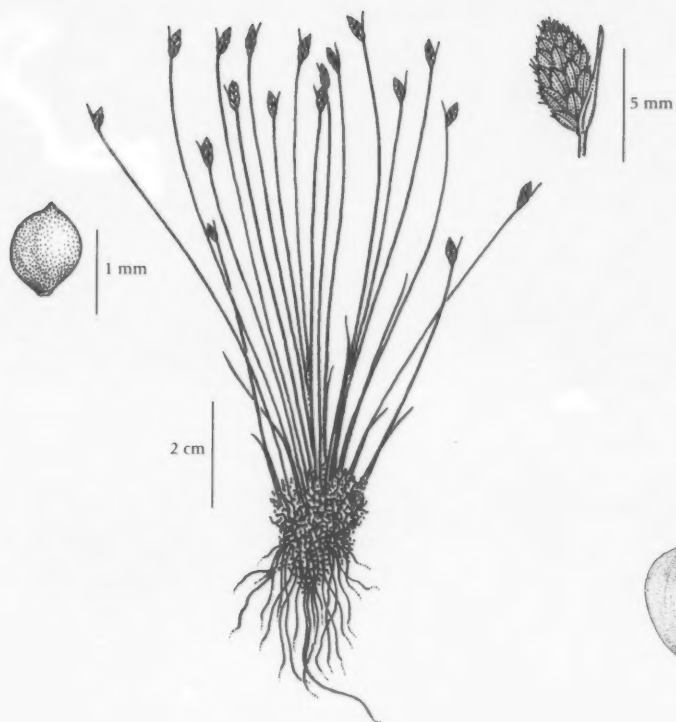
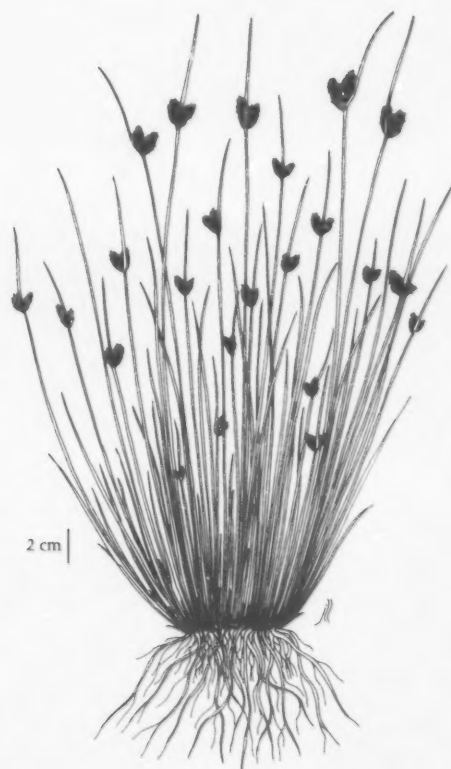
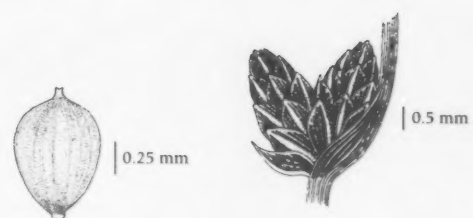
Leaves: One to few near the bases, variously developed in different plants, sometimes with normal sheaths and blades; blades elongate, slender, up to as long as the stem, sometimes the lower ones reduced to scales, the uppermost ones with sheaths and very short blades.

Flowers: Spikes 1 to 4 (10), egg-shaped, 2-5 mm long, in unstalked, simple or compound clusters, appearing on the side of the stems; involucral bracts solitary, appearing as extensions of the stems, up to 2 cm long, surpassing the inflorescence.

Fruits: Scales purplish-brown, egg-shaped to broadly elliptical, smooth, 1.3-2.1 mm long, 0.6-1.2 mm wide, the midribs green, blunt, with abruptly sharp-pointed tips; perianth bristles lacking; achenes 3-angled with convex faces and round angles, brown or black, shiny, prominently longitudinally ribbed and finely cross-wrinkled, 0.5-1.2 mm long.

KOBRESIA

1. Inflorescence a narrow panicle of several spikes *K. simpliciuscula*
1. Inflorescence a compact, solitary spike.
 2. Scales 3.5-6 mm long; spikes 4-7 mm wide; roots with dense greyish hairs *K. sibirica*
 2. Scales 2.5-3.5 mm long; spikes 2-3 mm wide; roots smooth *K. myosuroides*

*Isolepis cernua**Isolepis setacea*

Kobresia myosuroides (Vill.) Fiori (*K. bellardii* [All.] Degl. ex Loise)**Bellard's kobresia**

HABITAT/RANGE:

Mesic to dry meadows, rock outcrops and ridges in the montane to alpine zones; frequent in BC in and E of the Coast-Cascade Mountains; circumpolar, N to AK, YT and NT, E to Labr. and S to NM, UT and CA; Eurasia.

DESCRIPTION:

General: Perennial, densely tufted herb from smooth, fibrous roots; stems slender, wiry, more or less circular in cross-section, tapered, 5-40 cm tall, more often surpassing or sometimes shorter than the leaves.

Leaves: Numerous; basal sheaths brownish to dark brown, persistent and conspicuous, densely-packed, shredded, generally lacking blades; blades very slender and wiry, flat to folded or in-rolled, mostly 0.3-0.6 mm wide.

Flowers: Inflorescence a solitary, terminal, erect, slender, 1- to 3-cm long, 2- to 3-mm wide spike, the spikelets each with 1 male and 1 female flower, the male flower above the female flower; involucre bracts solitary, scalelike or short and leafy.

Fruits: Scales 2.5-3.5 mm long, brown, the margins broadly translucent, sometimes rough, otherwise smooth; stigmas 2 or 3; achenes compressed, 3-angled, 1.5-3 mm long.

Kobresia sibirica (Turcz. ex Ledeb.) Boeckl.**Siberian kobresia**

HABITAT/RANGE:

Bogs, wet to dry meadows and shrubby slopes in the upper montane to alpine zones; rare in N BC, known only from the Liard Plateau; amphiberian, N to AK, YT and NT and S to CO; E Asia.

DESCRIPTION:

General: Perennial, tufted herb from densely greyish-hairy fibrous roots; stems slender, wiry, 4-30 cm tall.

Leaves: Numerous; basal sheaths brownish, persistent and conspicuous, densely-packed, shredded, generally lacking blades; blades linear to thread-like, mostly 0.5-1.2 mm wide.

Flowers: Inflorescence a solitary, terminal, erect, 1.4- to 1.9-cm long, 4- to 7-mm wide spike, the spikelets each with 1 male and 2 or 3 female flowers, the male flower above the female flowers; involucre bracts solitary, scalelike.

Fruits: Scales 3.5-6 mm long, brown, the margins broadly translucent; stigmas 3; achenes compressed, 3-angled, 2.5-3.5 mm long.

Kobresia simpliciuscula (Wahl.) Mack.**simple kobresia**

HABITAT/RANGE:

Bogs, wet meadows and shallow ponds in the montane and subalpine zones; infrequent in extreme N BC; circumpolar, N to AK, YT and NT, E to NF and S to CO, UT, ID and OR; Eurasia.

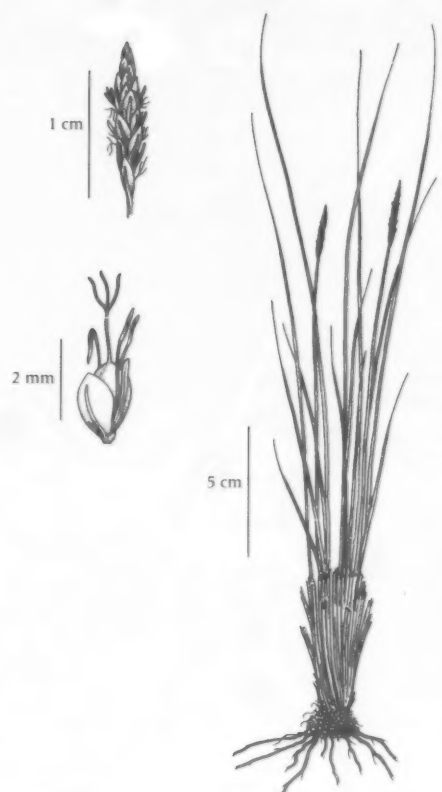
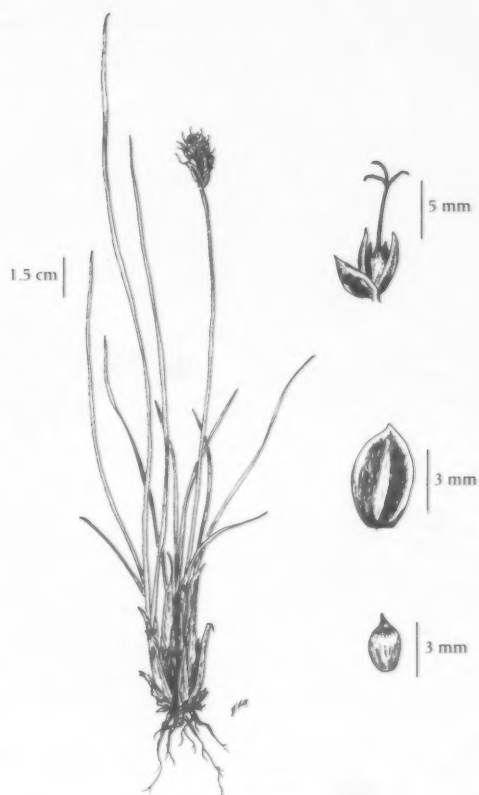
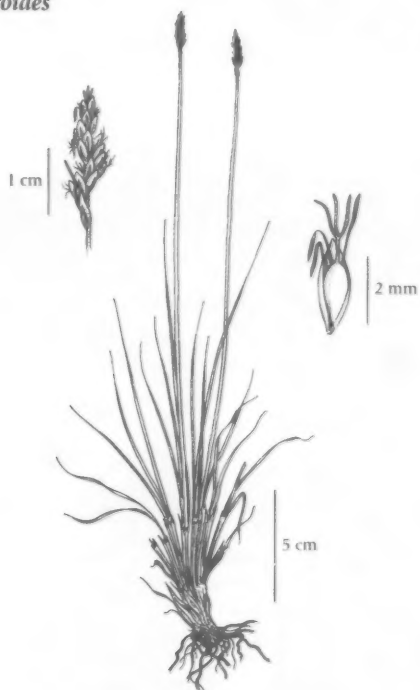
DESCRIPTION:

General: Perennial, tufted herb from smooth fibrous roots; stems 7-35 (50) cm tall.

Leaves: Sheaths brown to yellowish-brown, persistent, with conspicuous dried blades from the previous year at flowering time; blades linear, mostly 0.4-1.5 mm wide, either surpassing or shorter than the stem.

Flowers: Inflorescence a narrow panicle, 1.5-4 cm long, mostly 3-8 mm wide, with 3 to 12, terminal, erect, 1.2- to 3-mm long, 0.4- to 1.1-mm wide spikes, the spikelets each usually with 1 male and 1 female flower, the male flower above the female flower; involucre bracts solitary, scalelike or leaflike and bristle-tipped.

Fruits: Scales brownish, with broad, translucent margins; stigmas 3; achenes compressed, 3-angled, 2.3-3 mm long.

*Kobresia myosuroides**Kobresia sibirica**Kobresia simpliciuscula*

LIPOCARPHA

Lipocarpha micrantha (Vahl) G. Tucker (*Hemicarpha micrantha* [Vahl] Britt.)

small-flowered lipocarpha; small-flowered half chaff sedge

HABITAT/RANGE:

Sandy lakeshores in the steppe zone; rare in SC BC, known only from Osoyoos Lake; disjunct E to ON and S to ME, MA, PA, NC, FL, MS, TX, NM, AZ and CA.

DESCRIPTION:

General: Annual, tufted herb from fibrous roots; stems slender, 2-20 cm tall.

Leaves: Blades about 0.5 mm wide, up to 10 cm long, resembling the stems.

Flowers: Spikes mostly 1 to 3 per stem, unstalked, egg-shaped, 2-6 mm long, 1.5-2.5 mm wide; involucre bracts 2, the inner one absent or shorter, half the length of the inflorescence, the outer one widely lanceolate, the body 0.8-1 cm long, the awn 0.1-0.2 cm long, appearing as a continuation of the stem.

Fruits: Scales firm, egg-shaped, 1-2 mm long, rather abruptly contracted to blunt short tips or short, stout awn tips up to about 0.5 mm long, achenes light brown, narrowly, with convex faces, finely pitted, minutely and abruptly sharp-pointed, 0.5-0.7 mm long.

RHYNCHOSPORA

1. Spikes white, becoming pale brown, often with a whitish or pinkish tinge; achenes 1.5-2.5 mm long, tubercles 1/3 to 1/2 as long as the achenes *R. alba*

1. Spikes reddish-brown to dark brown; achenes 2.5-4.2 mm long; tubercles 1/2 to nearly as long as the achenes *R. capillacea*

Rhynchospora alba (L.) Vahl

white beak-rush

HABITAT/RANGE:

Bogs and fens in the lowland and montane zones; frequent in and W of the Coast-Cascade Mountains in BC south of 56° N, rare in SC BC; circumpolar, N to SW AK, E to NF and S to ME, MA, NC, IN, IL, MN, ID and CA; West Indies, Eurasia.

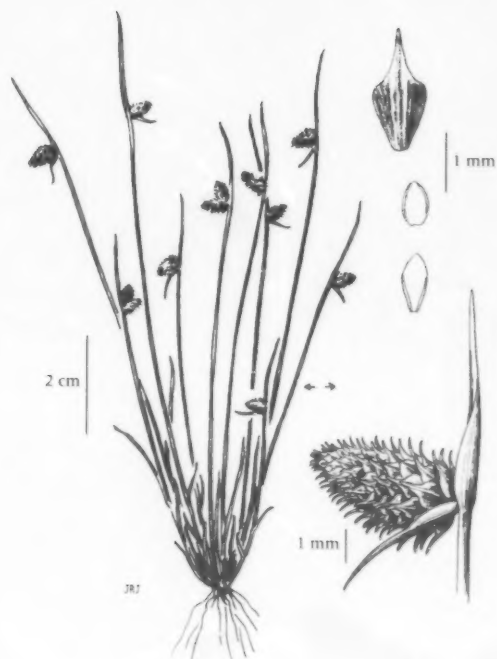
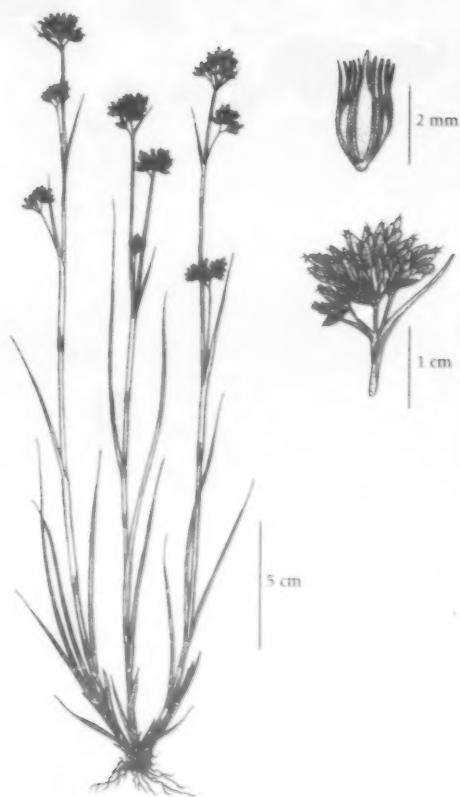
DESCRIPTION:

General: Perennial, densely tufted herb from fibrous roots; stems slender, more or less solid, triangular in cross-section, usually longer than the leaves, (8) 15-50 cm tall.

Leaves: Sheaths straw-coloured, more or less persistent, closed; blades several, on the stem, the lowest more or less reduced, often to mere scales, the others slender and elongate, folded or triangular in cross-section to thick and flat, 0.3-1 mm wide.

Flowers: Inflorescence of 1 to 3, compact, axillary or terminal heads, mostly 5-15 mm wide, the terminal head larger than the others, each head with several to many spikes, the spikes white, becoming pale brown, often with a whitish or pinkish tinge, mostly 3.5-5 mm long, 2- to 3-flowered; involucre bracts longer or shorter than the inflorescence, 0.5-6 cm long.

Fruits: Scales egg-shaped or lanceolate, pale brown, translucent on the margins, spirally arranged within the spikes; perianth bristles 10 to 12, well-developed, minutely finely barbed backwards, surpassing the achene bodies and sometimes also the tubercles; achenes lens-shaped, 1.5-2.5 mm long; broadest above the middle, tapering to narrow, nearly stalked bases, capped by elongate, narrow awl-like tubercles, about 1/3 to 1/2 as long as the achenes.

*Lipocarpha micrantha**Rhynchospora alba*

Rhynchospora capillacea Torr.

brown beak-rush

HABITAT/RANGE:

Calcareous fens, swamps and shorelines in the montane zone; rare in SC BC, known only from the Salmon Arm area; E to NF and S to ME, MA, VI, AL, AR and TX.

DESCRIPTION:

General: Perennial, tufted herb, sometimes forming mats; stems more or less solid, triangular in cross-section, 10-40 cm tall.

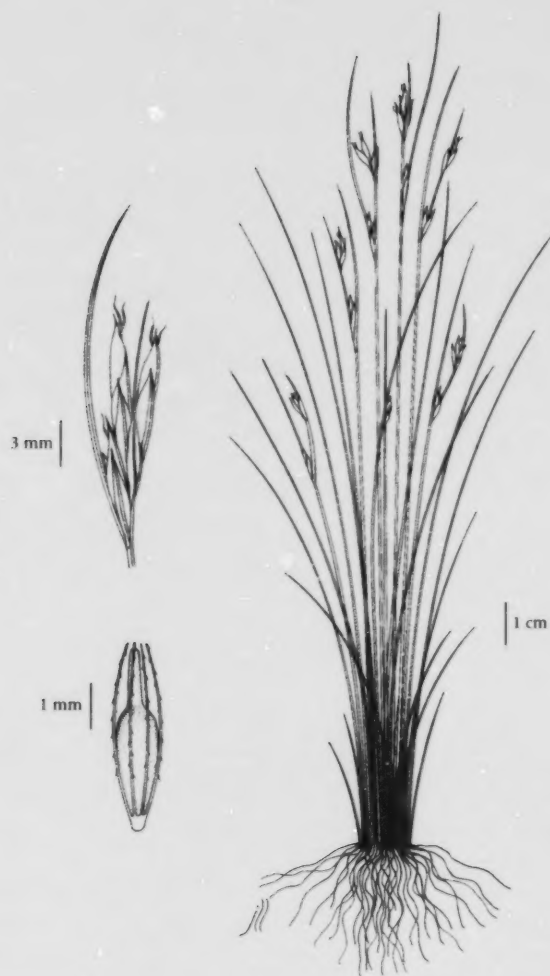
Leaves: Sheaths closed; blades in-rolled, threadlike, 0.2-0.4 mm wide.

Flowers: Inflorescence of 1 or 2, compact, axillary or terminal heads, the terminal head egg-shaped, the lateral ones remote, nearly unstalked, each head with 2 to 10, reddish-brown to dark brown, erect or ascending spikes, the axillary heads each with 1 to 4 spikes; involucre bracts longer than inflorescence, 1-2 cm long.

Fruits: Scales translucent on the margins, spirally arranged within the spikes; perianth bristles 6, finely barbed backwards, surpassing the achenes; achenes often obscurely marked with dark horizontal lines, broadest above the middle, conspicuously narrowed towards the bases, 2.5-4.2 mm long, less than 1/2 as wide, capped by tubercles, 1/2 to nearly as long as the achenes.

SCHOENOPLECTUS

1. Plants fibrous rooted annuals, rarely over 30 cm tall; achenes prominently cross-wrinkled; perianth bristles present or absent *S. saximontanus*
1. Plants rhizomatous perennials, usually well over 30 cm tall; achenes smooth or cellular net-veined; perianth bristles present.
 2. Spikes more or less numerous in a branching inflorescence, often unstalked in clusters at the ends of branches; stems stout.
 3. Spikes reddish-brown; scales about equal to the achenes, essentially smooth except for the hairy margins *S. tabernaemontani*
 3. Spikes dull, grey brown; scales surpassing the achenes, more or less sticky short-hairy *S. acutus*
 2. Spikes 1 to 15, unstalked in an unbranched cluster; stems slender.
 4. Spikes solitary, rarely 2; plants usually aquatic; the flaccid stems usually floating at the tips rather than emersed *S. subterminalis*
 4. Spikes 2 or more; plants sometimes growing in water, but stems stiff and emergent for most of their length.
 5. Involucre bracts solitary; stems sharply triangular with concave sides; achenes 1.8-2.5 mm long *S. americanus*
 5. Involucre bracts 2 or 3, the second and third ones resembling enlarged scales of the spikes; stems not sharply triangular, the sides only slightly concave or slightly convex; achenes 2.2-3.3 mm long *S. pungens*



Rhynchospora capillacea

***Schoenoplectus acutus* (Muhl. ex Bigelow) A. & D. Löve** (*Scirpus acutus* Muhl. ex Bigelow, *S. lacustris* L. pro parte, *S. lacustris* L. var. *occidentalis* S. Wats., *S. occidentalis* [S. Wats.] Chase)

hard-stemmed bulrush

HABITAT/RANGE:

Marshes, lakeshores and streams in the lowland, steppe and montane zones; common throughout BC south of 56° N, less frequent northward; N to AK and YT, E to NF and S to TN, GA, TX, NM and CA.

DESCRIPTION:

General: Perennial herb from stout rhizomes, forming large colonies; stems circular in cross-section, tapered, firm, not easily crushed between the fingers, 100-300 (500) cm tall.

Leaves: Few, borne mainly or entirely toward the bases of the stems; sheaths prominent, well-developed; blades short, poorly-developed, or bladeless.

Flowers: Spikes numerous, terminal, dull grey brown, 8-15 mm long, egg-shaped to cylindrical, pointed, all or nearly all unstalked in small clusters at the ends of the rather stiff, ascending or horizontal branches of the open or compact, somewhat umbel-like inflorescence; involucre bracts several, the principal, conspicuous one usually green, erect or nearly so, resembling an extension of the stem, 2-10 cm long.

Fruits: Scales pale grey-white with numerous, short, linear, reddish-brown marks, more or less sticky short-hairy, mostly (3) 3.5-4 mm long, broadly egg-shaped, the margins somewhat irregularly jagged or fringed with cobwebby, soft, long-tangled hairs, the midribs firm, rough, exserted, often from broad notches as short awn-tips; perianth bristles fragile, minutely and finely-barbed backwards, equalling or slightly surpassing the achenes; achenes plano-convex or unequally 3-angled, more or less completely hidden by the scales even at maturity, 2.2-2.5 mm long including the abruptly sharp-pointed tips.

***Schoenoplectus americanus* (Pers.) Volk. ex Schinz & R. Keller** (*Scirpus americanus* Pers., *S. olneyi* A. Gray)

Olney's bulrush

HABITAT/RANGE:

Saline or alkaline marshes and wet meadows in the lowland and montane zones; rare in SW BC; disjunct E to NS and S to MA, NC, FL, MS, TX, NM, AZ and CA; S America.

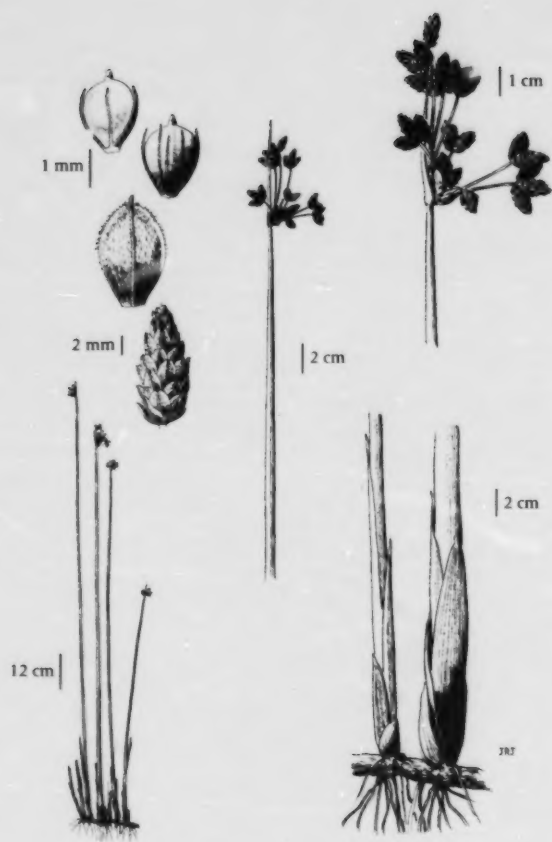
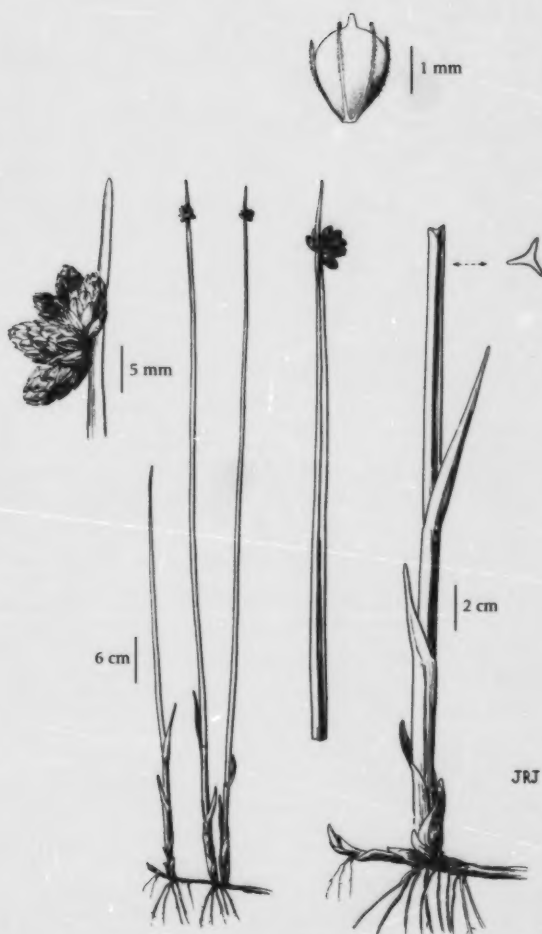
DESCRIPTION:

General: Perennial herb from long rhizomes; stems sharply triangular in cross-section with concave sides, when growing in water, stiff and emergent most of their lengths, 40-250 cm tall.

Leaves: Few, basal, less than 1/2 the length of the stems; sheath orifice often splitting; blades 1 to 3, V-shaped near the base and triangular to asymmetrically flattened on the sides near the tips, smooth or the angles more or less rough near the tips, 2-8 mm wide, 25-200 cm long.

Flowers: Spikes 2 to 15, terminal, unstalked, 5-15 mm long, 3-5 mm wide in unstalked, headlike clusters; involucre bracts solitary, leaflike, erect or nearly so, resembling an extension of the stem, (1) 3-20 cm long.

Fruits: Scales bright orange- to red- or purplish-brown or often straw-coloured, with numerous, short, linear marks, 2.7-4 mm long, broadly egg-shaped, smooth or the awns sparsely minutely-spined, deciduously fringed with small hairs, the midribs prominent, mostly paler, the tips awned, rounded to pointed, cleft, the clefts 0.1-0.4 mm deep, the awns somewhat bent, 0.2-0.6 mm long; perianth bristles (2) 5 to 6 (7), orange-brown, minutely spined backwards, slender to stout, about 1/2 as long to equalling the achenes; achenes brown, smooth, glossy, thickly plano-convex or unequally biconvex, or 3-angled, the angles rounded, 1.8-2.5 mm long, the beaks 0.1-0.3 mm long.

*Schoenoplectus acutus**Schoenoplectus americanus*

Schoenoplectus pungens* (Vahl) Palla var. *longispicatus* (Britt.) S.G. Smith (*Scirpus americanus* auct. non Pers., *S. longispicatus* [Britt.] Smyth)*American bulrush****HABITAT/RANGE:**

Marshes, lakeshores, saline shores and wet meadows in the lowland and steppe zones; common in SW and SC BC, rare in SE BC; cosmopolitan, disjunct N to EC AK, E to SK and S to IN, MS, TX, NM, AZ and CA; S America, S Australia, New Zealand.

DESCRIPTION:

General: Perennial herb from long, often vertical rhizomes; stems not sharply triangular in cross-section, the sides only slightly concave or convex, smooth, when growing in water, stiff and emergent for most of their lengths, 10-200 cm tall.

Leaves: Few, basal, about equalling the stems; sheath orifice often splitting; blades 2 to 6, V-shaped near the base and triangular near the tips, asymmetrically flattened on the sides, the angles often rough near the tips, 5-75 cm long and 2-9 mm wide.

Flowers: Spikes 1 to 6, terminal, unstalked, (7) 10-23 mm long, 3-4 (5) mm wide in unstalked, head-like clusters; involucre bracts 2 or 3, the second and third ones resembling enlarged scales of the spikes, the principal, larger one, leaflike, triangular in cross-section near the base, erect or nearly so, resembling an extension of the stem, (1) 3-20 cm long.

Fruits: Scales bright orange- to reddish (or purplish)-brown or often straw-coloured, with numerous, short, linear marks, 3.5-6 mm long, 2-3 mm wide, egg-shaped, smooth or the awns sparsely minutely-spined, deciduously fringed with small hairs, the midribs prominent, mostly paler, the tips awned, pointed (to blunt), 2-cleft, the clefts 0.5-1 mm deep, the awns mostly irregularly bent, 0.8-1.5 mm long; perianth bristles 4 to 8 or apparently fewer, minutely spined backwards, variably slender to stout, equal or unequal, equalling the achenes or rudimentary; achenes brown, smooth, glossy, 3-angled to biconvex, 2.2-3.3 mm, the beaks 0.1-0.5 mm long.

Notes: The infraspecific taxonomy in this species has yet to be elucidated and certainly is not clear in BC.

Schoenoplectus saximontanus* (Fern.) Raynal (*Scirpus supinus* L. var. *saximontanus* [Fern.] Koyama, *S. saximontanus* Fern.)*Rocky Mountain clubrush****HABITAT/RANGE:**

Shallow water in the montane zone; rare in SC BC, known only from Shuswap Lake and Osoyoos Lake areas; S disjunct to OH, MO, TX, CO, UT and CA.

DESCRIPTION:

General: Annual herb from fibrous roots; stems clustered, decumbent to erect, slender, wiry, 3-30 cm tall.

Leaves: Few, borne mostly below the middle of the stem; sheaths bladeless, merely abruptly slender-tipped or the upper ones with slender blades sometimes up to 10 cm long.

Flowers: Spikes 2 to several, terminal, 3-15 mm long, unstalked or short-stalked, egg-shaped or lanceolate, in head-like clusters (that appear to be on the side of the stem) or with 1 or 2 branches to 15 mm long; involucre bracts erect but somewhat incurved, resembling a continuation of the stem, mostly 2-10 cm long, the subsidiary ones below the spikes inconspicuous, rarely as much as 3 cm long.

Fruits: Scales translucent, the midribs firmer, greenish and extending beyond the tips, 2.5-3.5 mm long; perianth bristles present or absent; achenes, nearly equilaterally strongly 3-angled, dark grey brown to blackish at maturity, finely but prominently cross-wrinkled, about 1.4 mm long.



Schoenoplectus pungens var. *longispicatus*



Schoenoplectus saximontanus

Schoenoplectus subterminalis* (Torr.) Soják (*Scirpus subterminalis* Torr.)*water clubrush****HABITAT/RANGE:**

Shallow ponds and streams in the lowland zone; infrequent in coastal and SC BC; N to AK, disjunct E to NF and S to ME, PA, SC, TN, MO, WY, ID and CA.

DESCRIPTION:

General: Perennial, usually aquatic herb from long, often reddish, weak, very soft rhizomes; stems practically circular in cross-section, tapered, flaccid, usually floating near the tips rather than emerged, 20-80 cm long.

Leaves: Leaves 5 to 20 or more, borne near the base, usually floating, or rarely with erect or emergent leaves, about equalling the stems; sheaths straw-coloured to whitish, often free from the stems and resembling blades; blades elongate, slender, flaccid, C-shaped in cross-section near the base, flattened most of the length, mostly longer than the sheaths.

Flowers: Spikes solitary, rarely 2, light brown, 7-12 mm long, egg-shaped to nearly cylindrical; involucre bracts solitary, conspicuous, stiff, not leaflike, appearing like an extension of the stem, (1) 1.5-6 cm long.

Fruits: Scales 4-6 mm long, faintly-nerved, smooth, sometimes fringed with small, short hairs near the tips (at 40 times magnification), egg-shaped to lanceolate, pointed, the midribs firm, sometimes minutely exerted into awns up to 0.1 mm long; perianth bristles 4 to 6, brown, minutely- and finely-barbed backwards, shorter than to occasionally equalling or slightly surpassing the achenes; achenes 3-angled, brown, 2.5-3.8 mm long including the prominent (0.5 mm long), abruptly sharp-pointed tips.

Schoenoplectus tabernaemontani* (K.C. Gmel.) Palla (*S. lacustris* L. ssp. *glaucus* [Reichenb.] Hartm., *S. lacustris* ssp. *validus* [Vahl] Koyama, *Scirpus validus* Vahl)*soft-stemmed bulrush****HABITAT/RANGE:**

Marshes, lakeshores and streams in the lowland, steppe and montane zones; frequent throughout BC; N to AK and YT, E to NF and S to ME, MA, PA, SC, FL, MS, TX, NM, AZ and CA; C America.

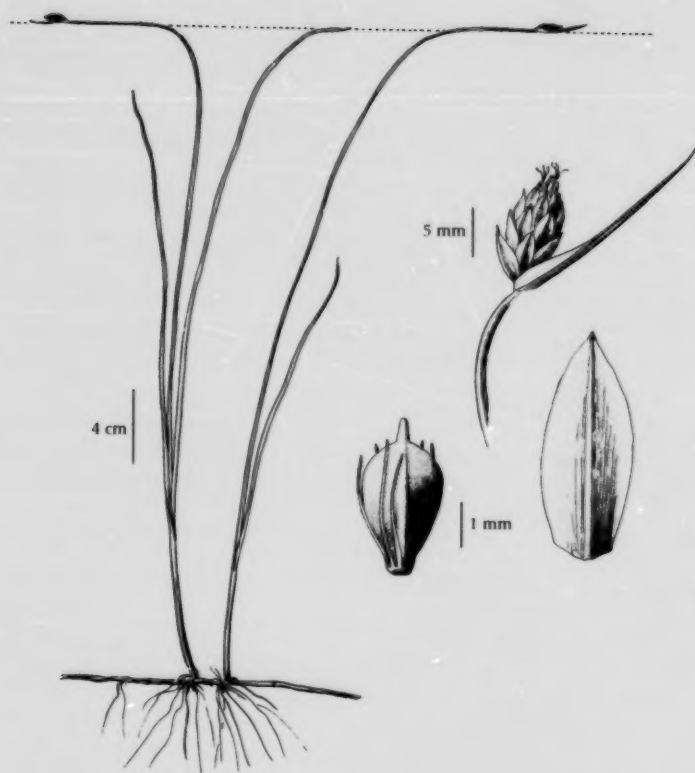
DESCRIPTION:

General: Perennial herb from long rhizomes; stems nearly round in cross-section, tapered, smooth, easily crushed between the fingers, 50-200 cm tall or more.

Leaves: All near the base of the stems, few, to about 1/2 the length of the stems; sheaths brown to straw-coloured or mottled brownish, reddish near the base; blades usually lacking or 1 or 2, if present, C-shaped to flattened top to bottom, much shorter than the sheaths, the margins often minutely rough.

Flowers: Spikes several to numerous, terminal, reddish-brown, 5-12 mm long, in unstalked clusters in a branching inflorescence, or some of them borne singly in compound, compact to open clusters, the branches of the inflorescence lax, sometimes drooping; involucre bracts solitary, rarely more, erect, reduced, not leaflike, thickly C-shaped to nearly circular in cross-section, tapered, with sometimes minutely rough margins, to as much as 7 cm long, appearing like an extension of the stem.

Fruits: Scales brown to purplish-brown, with numerous, short, red-brown linear marks, (2) 2.5-3 (3.5) mm long, smooth, egg-shaped, the margins entire to somewhat irregular or jagged or short-fringed and short-awned; perianth bristles 6, brown, about equalling to surpassing the achenes; achenes plano-convex, mostly 2-2.3 mm long, not completely concealed by the scales at maturity, abruptly sharp-pointed.

*Schoenoplectus subterminalis**Schoenoplectus tabernaemontani*

SCIRPUS

1. Perianth bristles long, flexuous, without barbs, far surpassing the achenes and scales; stigmas 3 *S. atrocinctus*
1. Perianth bristles minutely and finely-barbed backwards, nearly equal to slightly surpassing the achenes but not the scales; stigmas 2 or 3.
 2. Sheaths red-tinged, at least the basal ones; perianth bristles 4 to 6, barbed nearly to the base; stigmas 2 *S. microcarpus*
 2. Sheaths not red-tinged; perianth bristles usually 6, barbed only above the middle; stigmas 3 *S. pallidus*

Scirpus atrocinctus Fern. (*S. cyperinus* [L.] Kunth var. *brachypodus* [Fern.] Gilly)

wool-grass

HABITAT/RANGE:

Swamps and wet meadows in the lowland and montane zones; frequent in extreme SW BC, infrequent in SC BC, rare in SE BC and the Queen Charlotte Islands; E to NF and S to ME, MA, PA, WV, MI, IL, IO, SD and WY.

DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems nearly circular in cross-section, tapered, 80-150 cm tall.

Leaves: Several, both stem and basal; blades elongate, flat, grass-like, 2-6 mm wide.

Flowers: Spikes numerous, terminal, 3-8 mm long, egg-shaped to cylindrical, shortly slender-stalked in compound, terminal, sometimes condensed clusters, the branches ascending from the base, more or less spreading above, the ultimate branchlets also with one to several, unstalked spikes; involucre bracts several, conspicuous, leaflike, unequal, sheathless, blackish at the base, spreading, usually drooping at the tips, the largest rarely less than 10 cm long.

Fruits: Scales numerous, pale to often blackish or blackish-green with fine, red-brown parallel lines, about 1.5 mm long, smooth, egg-shaped, short awn-tipped to blunt; perianth bristles 6, well-developed, slender, flexuous, tawny, much surpassing the scales and achenes (especially in fruit, then the spike appearing short-woolly); stigmas 3; achenes compressed, 3-angled, pale, yellowish-grey to nearly white, 0.7-1 mm long, abruptly sharp-pointed.

Scirpus microcarpus J. & K. Presl (*S. sylvaticus* auct. non L., *S. sylvaticus* ssp. *digynus* [Boeckl.] Koyama)

small-flowered bulrush

HABITAT/RANGE:

Marshes, swamps and wet meadows in the lowland, steppe and montane zones; common throughout BC except absent in NW BC; amphiberingian, N to AK, E to NF and S to ME, MA, PA, WV, KY, IA, NE, NM, AZ and CA; E Asia.

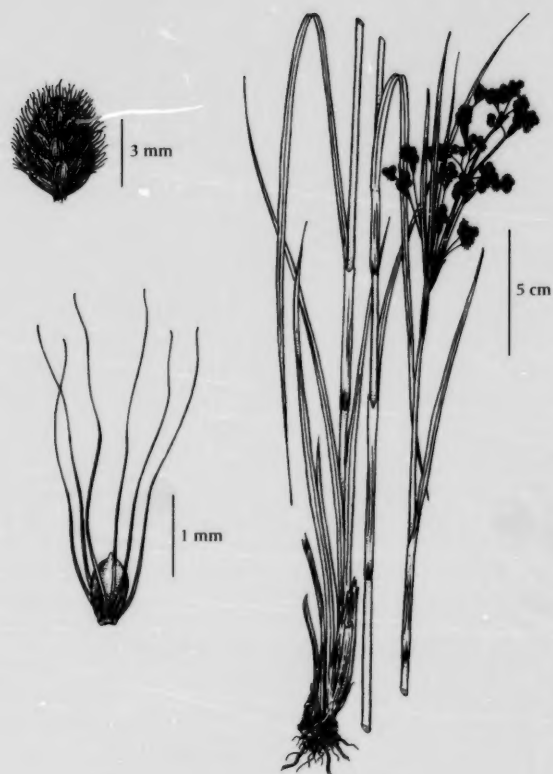
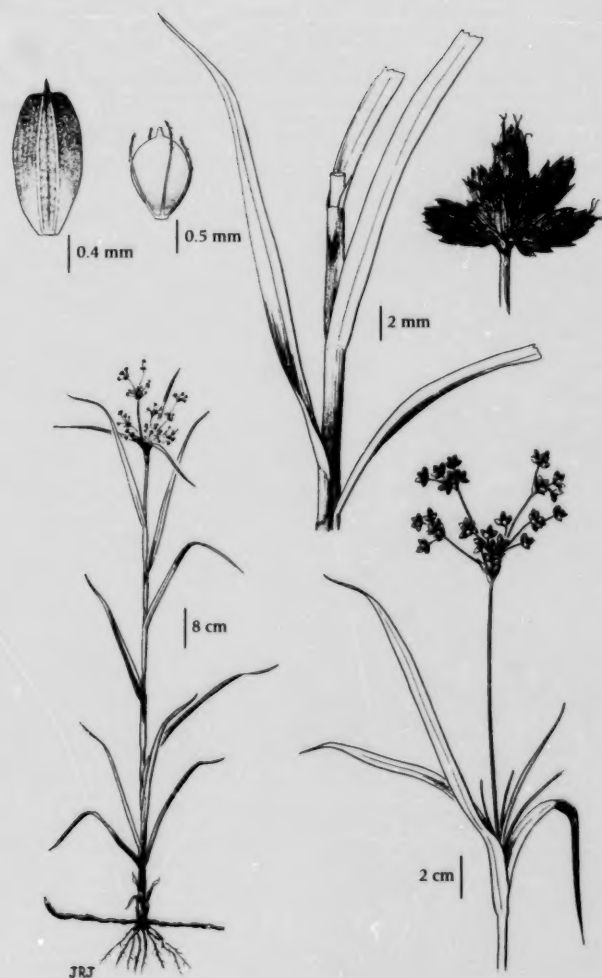
DESCRIPTION:

General: Perennial herb from well-developed, stout, creeping rhizomes; stems arising singly or a few together, obscurely triangular in cross-section, 60-150 cm tall.

Leaves: Several, both stem and basal; sheaths tinted with reddish-purple or straw-coloured to greenish, cross-wrinkled; blades flat, grass-like, (6) 8-15 (20) mm wide, up to several 10's of cm long.

Flowers: Spikes numerous, terminal, 4-6 (8) mm long, unstalked in small stalked clusters, in a compound, umbel-like cyme; involucre bracts several, conspicuous, leaflike, unequal, sheathless, the largest rarely less than 10 cm long, sometimes as much as 30 cm long.

Fruits: Scales numerous, blackish or greenish-black, about 1.5 mm long, largely translucent and cellular-net-veined, smooth, egg-shaped, with greener, often poorly defined midribs that may extend from the tips as minute points; perianth bristles 4 to 6, slender, minutely and finely-barbed backwards nearly to the base, nearly equal to slightly surpassing the achenes, but not exerted beyond the scales; stigmas 2; achenes biconvex, pale, 1-1.2 mm long including the abruptly sharp-pointed tips.

*Scirpus atrocinctus**Scirpus microcarpus*

Scirpus pallidus* (Britt.) Fern. (*S. atrovirens* Willd. var. *pallidus* Britt.)*pale bulrush****HABITAT/RANGE:**

Swamps and wet meadows in the lowland and montane zones; rare in SE BC, also introduced in the Vancouver area; E to ON and S to PA, MO, TX, UT, NM, AZ, ID and NE OR.

DESCRIPTION:

General: Perennial, tufted herb from short, tough, fibrous rhizomes; stems loosely clustered, evidently triangular in cross-section, (40) 60-150 (180) cm tall.

Leaves: Leaves several, usually on the lower half of the stems; sheaths greenish or pale, not red-tinged; blades flat, grass-like, 6-15 (18) mm wide.

Flowers: Spikes numerous, terminal, 3-4 mm long, egg-shaped or short-cylindrical, unstalked in dense, nearly globe-shaped heads, that are usually at least 1 cm wide, the heads in open or sometimes very compact, umbel-like, sometimes compound (once or usually twice branched), terminal cymes; involucre bracts several, conspicuous, leaflike, unequal, sheathless, the largest rarely less than 10 cm long.

Fruit: Scales black or brownish-black, egg-shaped, 1.6-2.8 mm long, the midribs pale, awned, the awns flat or circular in cross-section, tapered, 0.4-0.6 (1.2) mm long; perianth bristles 6, persistent, minutely- and finely-barbed backwards only above the middle, the longest ones equalling the achenes; stigmas 3; achenes pale brown or almost white, plump, 3-angled or plano-convex, 0.8-1.2 mm long, 0.4-0.6 mm wide.

TRICHOPHORUM

1. Stems sharply triangular in cross-section, rough on the angles; at maturity, perianth bristles forming a silky white tuft extending 1-2.5 cm beyond the spikes *T. alpinum*
1. Stems circular in cross-section, tapered, smooth; perianth bristles scarcely, if at all, surpassing the spikes or absent.
 2. Plants rhizomatous; scales awnless or nearly so; perianth bristles absent *T. pumilum*
 2. Plants fibrous rooted; scales, at least the lower ones, awned; perianth bristles present *T. cespitosum*

Trichophorum alpinum* (L.) Pers. (*Eriophorum alpinum* L., *Scirpus hudsonianus* [Michx.] Fern.)*Hudson Bay clubrush****HABITAT/RANGE:**

Bogs, swamps, fens and wet meadows in the montane and subalpine zones; infrequent in BC east of the Coast Mountains; circumpolar, N to AK, YT and NT, E to NF and S to ME, MA, NY, MI, MN, MT and ID; Eurasia.

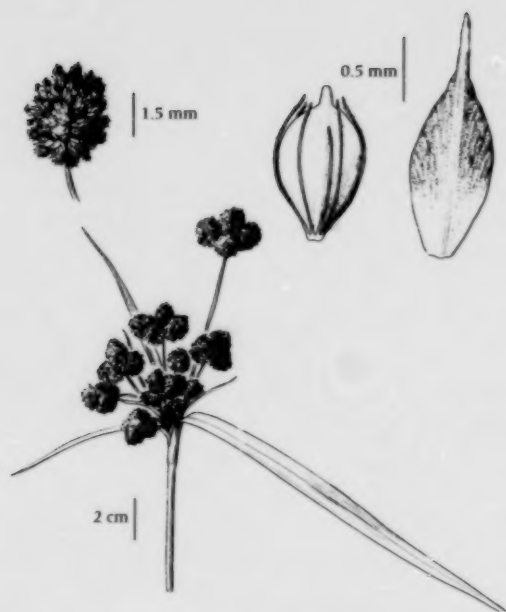
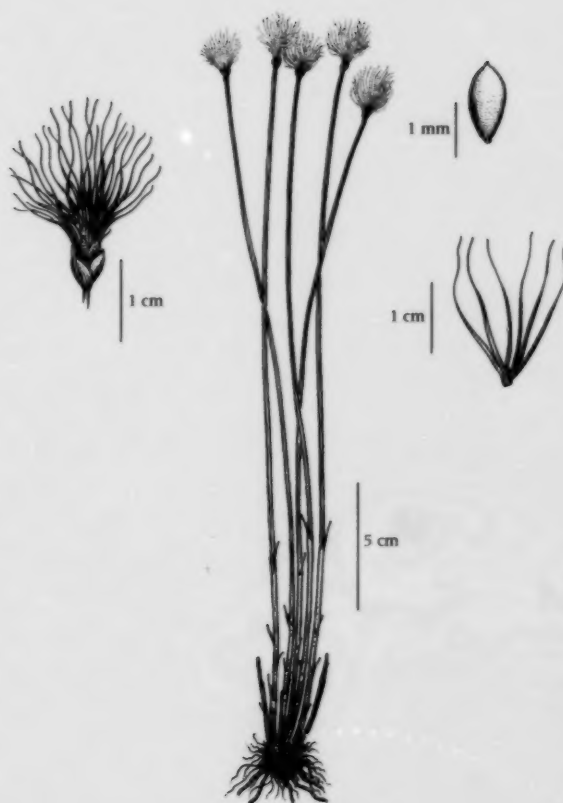
DESCRIPTION:

General: Perennial herb from short, freely rooting rhizomes; stems more or less densely clustered, in rows, sharply triangular in cross-section, rough on the angles, (5) 10-40 cm tall.

Leaves: More or less reduced, scalelike at the base of the stems, with 1 or sometimes 2, more normally-developed leaves above the base; sheaths straw-coloured to brownish, not cross-wrinkled; blades narrow, 5-12 mm long, rough on the margins, the hairs directed forward or upward, the tips firm, blunt, somewhat expanded and cartilaginous.

Flowers: Spikes solitary, terminal, medium or light brown, 5-7 mm long, many-flowered; involucre bracts lacking.

Fruits: Scales 2 or 3, chestnut, lanceolate to egg-shaped, blunt, the lowermost egg-shaped, up to as long as the spikes, with prominent, thickened midribs which are exerted as broad, blunt awns or small, short, abrupt points, 0.5-2 mm long; perianth bristles 6, white, flattened, smooth, crisped, elongate, much surpassing the scales, at maturity forming silky white tufts extending 1-2.5 cm beyond the end of the spikes; achenes purplish-brown, 3-angled, narrowly egg-shaped, about 1.5 mm long, minutely abruptly sharp-pointed.

*Scirpus pallidus**Trichophorum alpinum*

Trichophorum cespitosum* (L.) Hartm. (*Scirpus cespitosus* L.)*tufted clubrush****HABITAT/RANGE:**

Bogs, fens and wet meadows in all vegetation zones; frequent throughout BC; circumboreal, N to AK, YT and NT, E to NF and S to ME, MA, NC, GA, TN, MN, CO, ID and OR; Greenland, Eurasia.

DESCRIPTION:

General: Perennial, densely tufted herb from fibrous roots, sometimes from short, freely rooting rhizomes that connect the tufts; stems quite circular in cross-section, tapered, smooth, 10-40 cm tall.

Leaves: More or less reduced, scalelike, light brown at the base of the stem with a single, more normally-developed leaf a little above the base, this leaf with typical sheath, but somewhat abnormal blade; sheaths straw-coloured to brownish, not cross-wrinkled; blades slender, short, 4-6 mm long.

Flowers: Spikes solitary, terminal, medium to light brown, 4-6 mm long, 2- to 4-flowered; involucre bracts lacking.

Fruits: Scales 2 or 3, yellowish-brown, egg-shaped, pointed to minutely abruptly sharp-pointed, empty at the base of the spikes (these often deciduous as the spikes approach maturity), the lowermost of these scales about as long as the spikes, with prominent, broad, blunt-tipped awns, 1-3 mm long and sometimes shortly surpassing the spikes; perianth bristles 6, white, or brownish near the tips, very fragile, hairlike, usually surpassing the achenes, but scarcely if at all, surpassing the scales; achenes brown, 3-angled, narrowly egg-shaped, about 1.5 mm long, abruptly sharp-pointed.

Trichophorum pumilum* (Vahl.) Schinz & Thell. (*Scirpus pumilus* Vahl, *S. rollandii* Fern.)*dwarf clubrush****HABITAT/RANGE:**

Bogs, lakeshores, fens and wet meadows in the subalpine and alpine zones; rare in BC east of the Coast-Cascade Mountains and N of 51°N; circumpolar, N to YT and NT, E to PQ and S to CO, ID and CA; Eurasia.

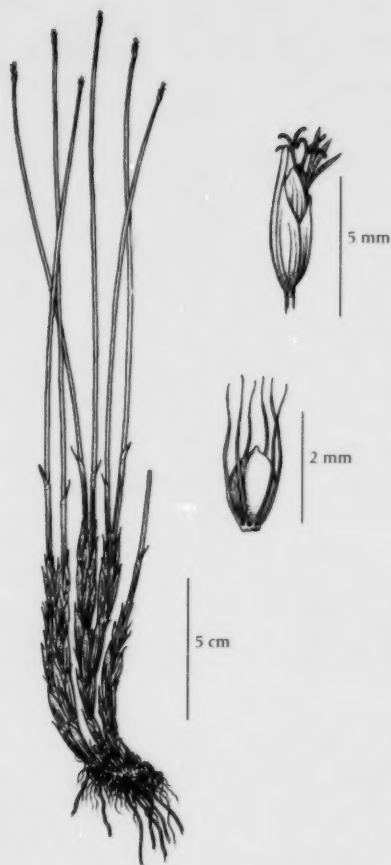
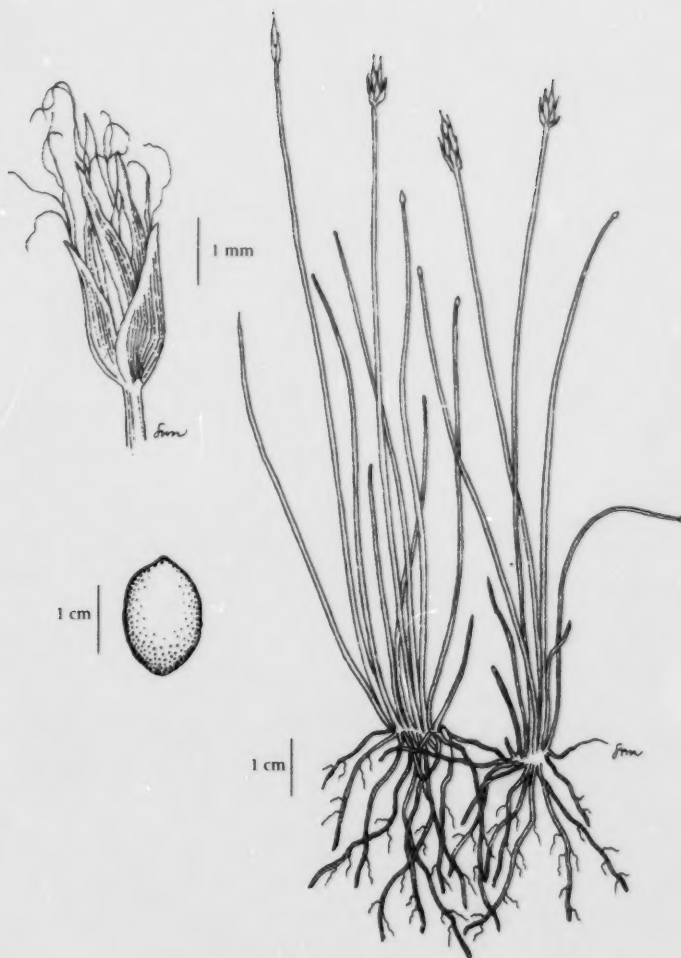
DESCRIPTION:

General: Perennial, tufted herb from slender rhizomes; stems nearly circular in cross-section, tapered, grooved, smooth, clothed at the base with dead stems and brown, persistent sheaths, up to 1 mm wide, 5-15 cm tall.

Leaves: All near the base of the stem; sheaths blackish to brownish, not cross-wrinkled; upper 1 to 3 blades slender, green, up to 3 cm long.

Flowers: Spikes solitary, terminal, medium to light brown, 2-3 mm long, 2- to 4-flowered; involucre bracts solitary, sometimes prolonged to more than 1/2 the lengths of the spikes, usually shorter, blunt-tipped.

Fruits: Scales brown, egg-shaped, the margins often lustrous brown and translucent, blunt or more or less pointed, awnless or nearly so; perianth bristles lacking; achenes dark brown or blackish, plano-convex, smooth, more or less beaked, 1.2-1.5 mm long.

*Trichophorum cespitosum**Trichophorum pumilum*

HYDROCHARITACEAE

1. Leaves few, basal and ribbon-like *Vallisneria*
1. Leaves numerous, opposite or whorled on elongate stems, not ribbon-like.
 2. Main leaves usually 2.5 cm long, or longer, in whorls of 3 (below) and 4 or 6 (above) *Egeria*
 2. Main leaves less than 2.5 cm long, opposite below or in whorls of 3 or sometimes 4 *Elodea*

EGERIA

Egeria densa Planch. (*Elodea densa* [Planch.] Casp.)

Brazilian waterweed

HABITAT/RANGE:

Lakes, ponds and streams; rare in SW BC, known only from the Victoria area; introduced from S America.

DESCRIPTION:

General: Perennial aquatic herb from a fibrous root; stems solitary, sparingly branched.

Leaves: Stem leaves in whorls of 3 (below) and 4 or 6 (above), lanceolate, 2-3.5 cm long, 2-5 mm wide, minutely sharp-toothed.

Flowers: Inflorescence 2- to 4-flowered (male) or 1-flowered (female); flowers axillary, long-stalked, one per stalk; petals 3, white, egg-shaped, 8-11 mm long; sepals 3, greenish, egg-shaped, 3-5 mm long; stamens 9.

Fruits: Capsules, cylindric or egg-shaped; seeds several.

Notes: Only male plants known in N America.

ELODEA

1. Leaves linear or linear-lanceolate, the tips narrowly tapering; male flowers deciduous, free-floating *E. nuttallii*
1. Leaves broadly lanceolate to oblong or egg-shaped, the tips usually rounded; male flowers not deciduous, not free-floating *E. canadensis*

Elodea canadensis Michx. (*Anacharis canadensis* [Michx.] Planch.)

Canadian waterweed

HABITAT/RANGE:

Lakes, ponds, streams and ditches in the lowland, steppe and montane zones; frequent in S BC south of 51° N, infrequent northward; E to PQ and NS and S to MA, PA, SC, FL, MS, TX, NM, AZ and CA.

DESCRIPTION:

General: Perennial aquatic herb from a fibrous root; flowering stems several, branched at the nodes.

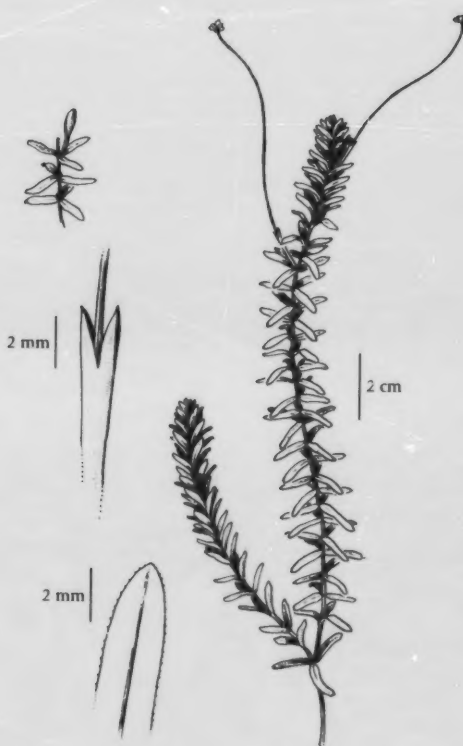
Leaves: Stem leaves in whorls of 3 or the lowest opposite, broadly lanceolate to oblong or egg-shaped, rounded at the tips, 6-17 mm long, 1-4 mm wide, minutely sharp-toothed.

Flowers: Inflorescence of either male or female, axillary, long-stalked, solitary flowers; petals 3, white, lanceolate, 4.5-5 mm long (male) or, 2-3 mm long (female); sepals 3, greenish, elliptic, 3.5-5 mm long (male) or 2-3 mm long (female); stamens 9.

Fruits: Capsules, cylindric or egg-shaped, about 6 mm long; seeds several, 4-5 mm long, smooth.



Egeria densa



Elodea canadensis

Elodea nuttallii (Planch.) St. John (*Anacharis nuttallii* Planch.)**Nuttall's waterweed****HABITAT/RANGE:**

Lakes, ponds and streams in the lowland, steppe and montane zones; rare in S BC; E to ON and SW PQ and S to MA, PA, NC, AL, AR, OK, NM, ID and CA.

DESCRIPTION:

General: Perennial aquatic herb from a fibrous root; flowering stems several, branched at the nodes.

Leaves: Stem leaves in whorls of 3, linear to linear-lanceolate, narrowly tapering to the pointed tips, 6-13 mm long, 0.3-1.8 mm wide, minutely sharp-toothed.

Flowers: Inflorescence of either male or female, axillary, solitary flowers, the male flowers unstalked, breaking away and floating to the surface where they open; petals 3, white, elliptic, 0.5-1 mm long or lacking (male) or 2-3 mm long (female); sepals 3, greenish, broadly lanceolate, about 2 mm long (male) or 2-3 mm long (female); stamens 9.

Fruits: Capsules, cylindric or egg-shaped, 5-7 mm long; seeds several, short soft-hairy, about 4 mm long.

VALLISNERIA*Vallisneria americana* Michx.**American tapegrass****HABITAT/RANGE:**

Lakes, ponds and streams in the lowland and montane zones; rare in SW and SC BC; introduced from E North America.

DESCRIPTION:

General: Perennial aquatic herb from a fibrous root and rhizomes; flowering stems several, arising from the base of the plant to the water surface, tending to be coiled, the female ones 1-2 m long.

Leaves: Basal leaves linear, 10-200 cm long, 1-10 mm wide, entire to minutely toothed, thin, longitudinally veined, the crosswalls often reddish, the tips rounded or abruptly pointed; stem leaves lacking.

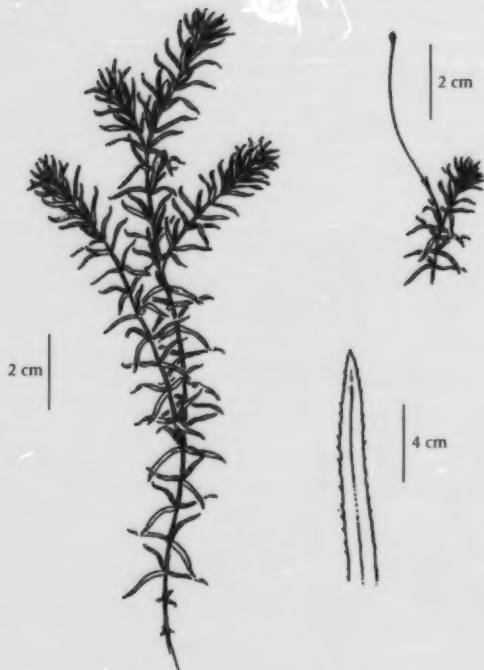
Flowers: Inflorescence of either numerous, nearly unstalked, axillary, male flowers or solitary, long-stalked, axillary female flowers; petals either 1, white, elliptic, about 1 mm long (male) or 3, about 0.2 mm long (female); sepals 3, greenish, broadly lanceolate, unequal, 0.5-0.8 mm long (male) or 5-6 mm long (female); stamens 2.

Fruits: Capsules, cylindric, 5-10 cm long; seeds small, numerous.

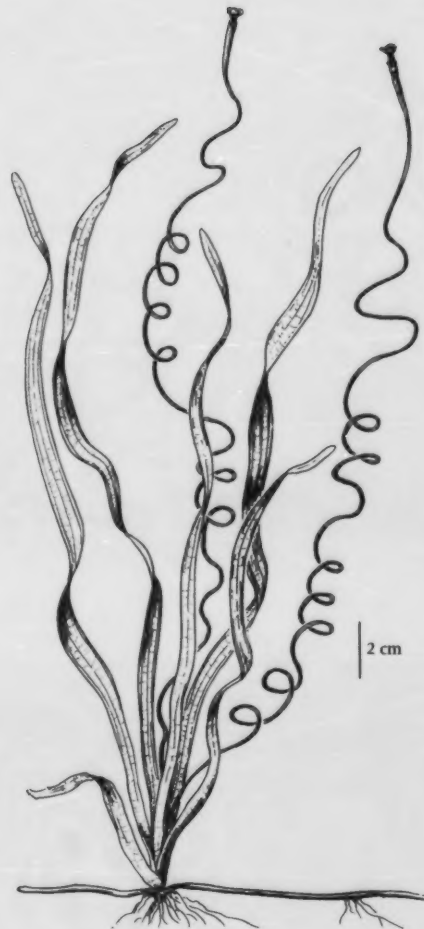
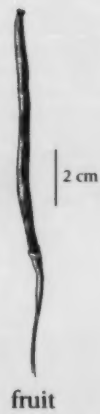
IRIDACEAE³

1. Flowers yellow to red, asymmetrical, curved to one side; plants from corms as well as rhizomes *Crocsmia*
1. Flowers blue, purple, white or pale to deep yellow, symmetrical; plants lacking corms.
 2. Perianth segments of two distinct types; flowers large, greater than 5 cm wide *Iris*
 2. Perianth segments all alike; flowers mostly small, less than 5 cm wide.
 3. Perianth segments reddish-purple, 5-25 mm long; filaments fused 1/3 to 1/2 their length; flowers usually strongly nodding; stems not winged *Olsynium*
 3. Perianth segments pale to deep blue or yellow (rarely white), 15-20 mm long; filaments fused to near their tips; flowers usually held erect or horizontally; stems winged *Sisyrinchium*

³ Several species and hybrids in the genus *Crocus* are cultivated and often persist around old homesites, in waste places and along roadsides, but they are not known to be truly naturalized in our flora. They are small plants from corms, with narrow, basal, grass-like leaves, with a white stripe along the midrib, and relatively large white, yellow or purple flowers.



Elodea nuttallii



Vallisneria americana

CROCOSMIA

Crocasmia x crocosmiiflora (V. Lem.) N.E. Br. (*Titonia x crocosmiiflora* [V. Lem.] Nichols.)

montbretia

HABITAT/RANGE:

Waste places and forest edges in the lowland zone; rare garden escape on Vancouver Island and the lower mainland; introduced from South Africa.

DESCRIPTION:

General: Perennial herb from corms, with a fibrous covering, often produced from rhizomes; flowering stems branched, 30-60 cm tall.

Leaves: Basal leaves linear-lanceolate, 30-60 cm long, 1-2.5 cm wide, entire, the tips long-pointed, the midribs conspicuous; stem leaves lacking.

Flowers: Inflorescence a panicle of spikes with numerous flowers, the spikes usually longer than the leaves; flowers funnel-shaped, yellow to red, the tubes usually curved, the lobes spreading, about equal; stamens free, exerted from the tubes.

Fruits: Capsules; seeds 3-6.

IRIS

1. Flowers yellow; plants usually more than 1 m tall *I. pseudacorus*
1. Flowers predominantly blue, purple or white; plants usually less than 1 m tall.
 2. Principal leaves usually more than 1 cm wide; petals (standards) 0.5-2 cm long, sharp pointed; plants occurring N of 60° N, also SE AK and YK *I. setosa*⁴
 2. Principal leaves 1 cm wide, or less; petals (standards) 3-6 cm long, blunt-tipped; plants occurring in S BC.
 3. Blades of sepals (falls) oblanceolate; bracts green or reddish and not papery at flowering time
..... *I. missouriensis*
 3. Blades of sepals (falls) broadly rounded; bracts brown and papery at flowering time *I. sibirica*

Iris missouriensis Nutt.

western blue iris

HABITAT/RANGE:

Moist lake margins and marshy meadows in the lowland and montane zones; rare in W BC, known from scattered localities, where probably introduced; E to SE AB and S to MN, NE, NM, AZ, CA and N MX.

DESCRIPTION:

General: Perennial herb from a thick rhizome; flowering stems usually simple, sometimes branched, 20-50 cm tall.

Leaves: Mostly basal, linear-lanceolate, 20-50 cm long, 5-10 mm wide, entire, the tips long-pointed.

Flowers: Inflorescence of 1 or 2, sometimes 3 or 4, showy flowers on stout, 4- to 6-cm long stalks; flowers light to deep blue, purple-lined, the tubes flared above, less than 6 mm long, the bracts green or reddish and not papery at flowering; petals erect, 3-6 cm long, 1.5-2 cm wide; sepals oblanceolate, 5-6 cm long, about 1 cm wide, bent back; style branches 2-2.5 cm long, the crests less than 1/2 as long; stigmas 2-lobed.

Fruits: Capsules, cylindrical, 3-5 cm long; seeds numerous.

⁴ Often confused with *Iris missouriensis* and all material from BC identified as *I. setosa* seems to be the former. As *I. setosa* has been found in adjacent parts of Alaska and the Yukon and may yet be found in NW BC, it has been retained in the key.



Crocosmia x crocosmiiflora



Iris missouriensis

Iris pseudacorus L.

yellow iris

HABITAT/RANGE:

Moist ditches, sloughs, marshy meadows and streambanks in the lowland and steppe zones; frequent garden escape in S BC; introduced from Europe.

DESCRIPTION:

General: Perennial herb from a thick rhizome; flowering stems usually simple, sometimes branched, 50-150 cm tall.

Leaves: Mostly basal, linear-lanceolate, 50-90 cm long, 1-3 cm wide, entire, the tips long-pointed.

Flowers: Inflorescence of (2) 4 to 12 showy flowers on stout, 2- to 5-cm long stalks; flowers pale to deep yellow, the tubes flared above, 1-1.5 cm long; petals erect, narrowed at the middle, about 2-3 cm long, 4-8 mm wide, the bracts herbaceous, the margins translucent; sepals broadly rounded, 5-7.5 cm long, 2-3 cm wide, bent back; style branches 2-2.5 cm long, the crests less than 1/2 as long; stigmas rounded.

Fruits: Capsules, cylindrical, 4-8 cm long; seeds numerous.

Iris sibirica L.

Siberian iris

HABITAT/RANGE:

Mesic to moist waste places and roadsides in the lowland zone; rare garden escape in S BC; introduced from Eurasia.

DESCRIPTION:

General: Perennial herb from a dense, fibrous root; flowering stems usually simple, sometimes branched, 50-120 cm tall.

Leaves: Mostly basal, linear-lanceolate, 25-80 cm long, 4-10 mm wide, entire, the tips long-pointed.

Flowers: Inflorescence of 1 to 3 (5) showy flowers on stout, 5- to 10-cm long stalks; flowers violet-blue, rarely white, the tubes flared above, 4-7 mm long, the bracts brown and papery at flowering time; petals erect to ascending, 2.5-4.5 cm long, 1.2-2 mm wide; sepals spoon-shaped, 3-5 cm long, 1-1.5 cm wide, bent back; style branches 2-2.5 cm long, the crests less than 1/2 as long; stigmas rounded.

Fruits: Capsules, nearly cylindrical, 3-4 cm long; seeds numerous.

OLSYNIUM

Olsynium douglasii (A. Dietr.) Bickn. (*Sisyrinchium douglasii* A. Dietr., *S. inflatum* [Suksd.] St. John = var. *inflatum*)
satinflower; Douglas' blue-eyed-grass (var. *douglasii*); purple blue-eyed-grass (var. *inflatum*)

HABITAT/RANGE:

Vernally moist rocky bluffs, grassy slopes and *Quercus garryana* woodlands in the lowland zone (var. *douglasii*) and sagebrush slopes in the steppe zone (var. *inflatum*); var. *douglasii* - infrequent on S Vancouver Island and the Gulf Islands; var. *inflatum* - rare in SC BC; var. *douglasii* - S to N CA; var. *inflatum* - S to UT, NV and OR.

DESCRIPTION:

General: Perennial tufted herb from a fibrous root; stems somewhat compressed, simple, 10-30 cm tall.

Leaves: Basal leaves reduced, bractlike, blades lacking or sometimes 1-2 cm long; stem leaves 2 to 4, linear, on the lower 1/2 of stem, sheathing, the blades 10-30 cm long, 1.5-3 mm wide, the tips long-pointed.

Flowers: Inflorescence of (1) 2 or 3 showy, nodding flowers on slender, flexuous, 3- to 4-cm long stalks; flowers reddish-purple, of 6 distinct oblanceolate to egg-shaped segments, these similar, 1.5-2.5 cm long, 5-nerved, abruptly pointed, the tubes slightly inflated below, 1-2 mm long; bracts 2, unequal, the upper one usually exceeding the flowers; filaments fused about 1/3 to 1/2 their length; anthers 3-7 mm long, yellow.

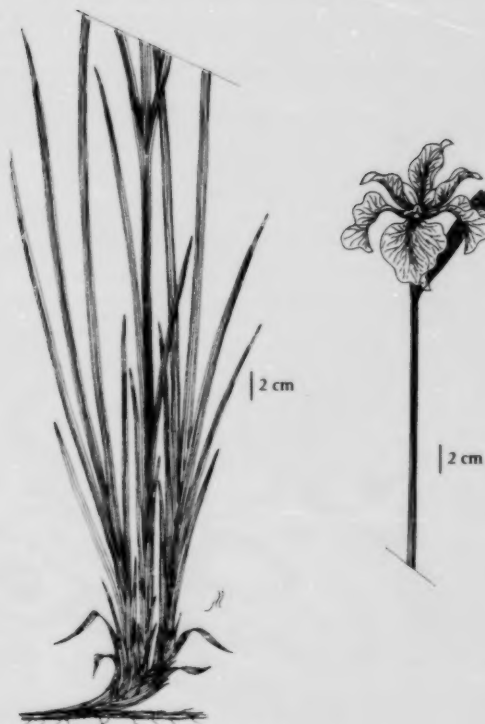
Fruits: Capsules, 5-9 mm long; seeds numerous, egg-shaped, brown, 1.5-2.5 mm long.

Notes: Two varieties occur in BC:

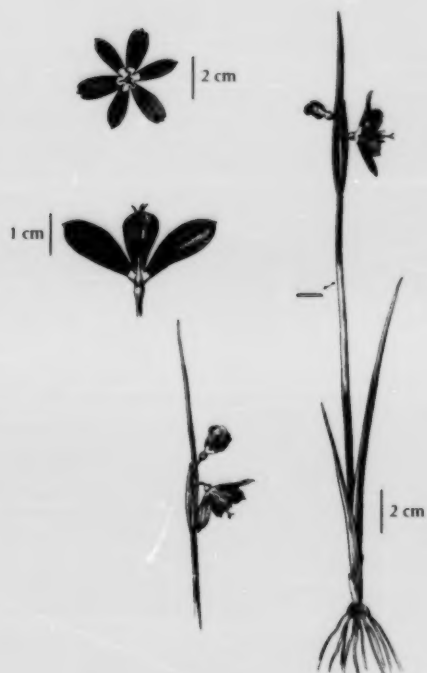
1. Perianth segments dark red-purple; filament tubes only slightly enlarged above the base; flowers commonly 2 per stem; plants of SW BC var. *douglasii*
1. Perianth segments pale purple; filament tubes with an inflated area just above the base; flowers commonly 3 per stem; plants of SC BC var. *inflatum* (Suksd.) Cholewa & Henderson



Iris pseudacorus



Iris sibirica



Olsynium douglasii var. *douglasii*



Olsynium douglasii var. *inflatum*

SISYRINCHIUM⁵

1. Flowers yellow; capsules oblong; plants becoming black on drying..... *S. californicum*
1. Flowers blue; capsules globe-shaped or egg-shaped; plants becoming dull, but not black on drying.
 2. Outer bract of inflorescence nearly twice the length of the inner, or longer, generally united basally for no more than 3.5 mm; stems generally wider than the leaves.
 3. Perianth segments elliptic, often deeply notched and bristle-tipped; outer bracts often widened above the tips of the inner; inner bract often abruptly protruding basally from the outer, giving the bracts a somewhat inflated, spathe-like appearance; flower stalks generally 19-30 mm long, often exceeding the inner bracts..... *S. montanum*
 3. Perianth segments oblanceolate, the tips rounded and bristle-tipped; outer bract tapering uniformly to slender, sharp-pointed tips; inner bracts not inflated; flower stalks generally 14-18 mm long, often shorter than the inner bracts..... *S. septentrionale*
 2. Outer bract of inflorescence usually much less than twice the length of the inner, united for 4-7 mm; stems generally equal to or narrower than the leaves.
 4. Leaves 2.5-5.5 mm wide (averaging 3.8 mm wide); stems 1.7-3.5 mm wide (averaging 2.4 mm wide); outer bract united for about 5 mm; styles generally not exerted beyond the anthers..... *S. littorale*
 4. Leaves and stems narrower, leaves averaging less than 3.8 mm wide; stems averaging less than 2.4 mm wide; outer bract united for about 4 mm; styles generally exerted beyond the anthers..... *S. idahoense*

Sisyrinchium californicum* (Ker-Gawl. ex Sims) Ait.*golden-eyed-grass****HABITAT/RANGE:**

Moist ponds margins, seepage slopes and bogs in the lowland zone; infrequent on S and W Vancouver Island and the Gulf Islands; S to S CA.

DESCRIPTION:

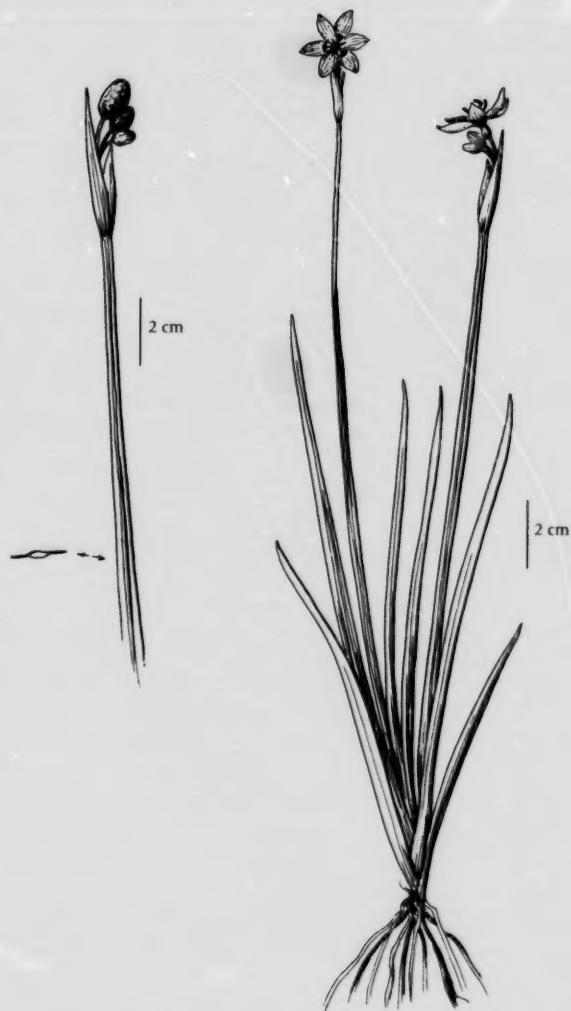
General: Perennial tufted herb from a fibrous root; stems simple, flat, winged, 5-60 cm tall.

Leaves: All basal, the blades 2 to 4, linear, on the lower 1/2 of stem, 10-30 cm long, 1.5-3 mm wide, sheathing, the tips long-pointed.

Flowers: Inflorescence of (1) 2 or 3 showy, nodding flowers on slender, flexuous, 3- to 4-cm long stalks; flowers yellow, of 6 distinct oblanceolate to egg-shaped segments, these similar, 1.5-2.5 cm long, 5-nerved, abruptly pointed, the tubes slightly inflated below, 1-2 mm long; bracts 2, unequal, the upper one usually exceeding the flowers; filaments fused about 1/3 to 1/2 their length; anthers 3-7 mm long, yellow.

Fruits: Capsules, oblong, 5-9 mm long; seeds numerous, egg-shaped, brown, 1.5-2.5 mm wide.

⁵ A difficult genus to which many names have been applied. Key and taxonomic treatment adapted from Henderson (1976).



Sisyrinchium californicum

Sisyrinchium idahoense Bickn. (*S. angustifolium* auct non Mill., *S. macounii* Bickn. = var. *macounii*)

Idaho blue-eyed-grass

HABITAT/RANGE:

Moist grassy meadows in the lowland, steppe and montane zones; var. *idahoense* – infrequent in S BC; var. *macounii* – rare on S Vancouver Island and the Gulf Islands; var. *idahoense* S to WY, ID and N CA; var. *macounii* – S to WA.

DESCRIPTION:

General: Perennial tufted herb from a fibrous root; stems simple or sometimes branched, flat, winged, 10-42 cm tall.

Leaves: Mostly basal, the blades several, linear, 10-30 cm long, (0.5) 2-2.5 (4.5) mm wide, sheathing, the margins entire to fine-toothed, the tips long-pointed; stem leaves 1 or few at the nodes, similar to basal.

Flowers: Inflorescence of 2 to 7 showy, erect to nodding flowers on slender, smooth to slightly glandular, 2- to 2.5-cm long stalks; flowers pale blue to purple or deep violet-purple, of 6 distinct, narrowly elliptic to oblanceolate segments, these similar, 1-1.5 (2) cm long, rounded to blunt, abruptly bristle-tipped, the tubes slightly inflated below, 1-2 mm long; bracts 2, unequal, the outer one usually exceeding the flowers; filaments fused about 1/3 their length; anthers (1) 1.3-2 (2.5) mm long, yellow.

Fruits: Capsules, egg-shaped to globe-shaped, 4-5.5 (6.5) mm long; seeds numerous, globe-shaped to angled, black, (1) 1.3-1.8 mm wide.

Notes: Two varieties occur in BC while a third, var. *segetum*, known from the nearby San Juan Islands in NW WA may be found in BC in the future.

1. Stems usually averaging at least 2 mm wide; perianth segments usually less than 1.5 cm long var. *idahoense*
1. Stems usually averaging less than 1.5 mm wide; perianth segments usually more than 1.5 cm long.
 2. Outer bracts at least twice as long as inner bracts; perianth usually more than 1.8 cm long; stems less than 1.5 mm wide var. *macounii* (Bickn.) Henderson
 2. Outer bracts usually less than twice as long as the inner bracts; perianth 1.5-1.8 cm long; stems usually less than 1.2 mm wide var. *segetum* (Bickn.) Henderson

Sisyrinchium littorale Greene

shore blue-eyed-grass

HABITAT/RANGE:

Moist to wet meadows, streamsides and tidal flats in the lowland zone; infrequent in coastal BC; N to SW AK and S to SW WA.

DESCRIPTION:

General: Perennial slightly tufted herb from a fibrous root; stems 1 or 2, simple or often branched, flat, 2-winged, 10-40 cm tall.

Leaves: Mostly basal, the blades several, linear, 10-30 cm long, 2-5.5 mm wide, sheathing, the margins entire to fine-toothed, the tips pointed; stem leaves 1 or few at nodes, similar to basal.

Flowers: Inflorescence of (1) 2 to 4 (5) showy, erect to nodding flowers on slender, smooth, 2- to 2.5-cm long stalks; flowers pale blue to more often deep violet-purple, of 6 distinct, narrowly elliptic to narrowly oblanceolate segments, these similar, 1.1-1.6 cm long, rounded to somewhat blunt, abruptly bristle-tipped, the inflated tubes below, 1-2 mm long; bracts 2, unequal, the outer one usually exceeding the flowers; filaments fused about 1/3 their length; anthers 1.2-1.7 mm long, pale yellow.

Fruits: Capsules, egg-shaped to globe-shaped, (5) 6-8 (9) mm long; seeds numerous, globe-shaped to angled, dark brown to black, 1.2-1.5 (1.7) mm wide.



Sisyrinchium idahoense var. *idahoense*



Sisyrinchium idahoense var. *macounii*



Sisyrinchium littorale

Sisyrinchium montanum Greene (*S. angustifolium* auct non Mill.)

mountain blue-eyed-grass

HABITAT/RANGE:

Moist meadows and streambanks in the steppe and montane zones; frequent in BC east of the Coast-Cascade Mountains; E to AB and S to CO, WY and MT.

DESCRIPTION:

General: Perennial tufted herb from a fibrous root; stems several, simple or rarely branched, flat, 2-winged, 10-50 cm tall.

Leaves: Mostly basal, the blades several, linear, 10-30 cm long, 1-3.7 mm wide, sheathing, the margins entire to finely toothed, the tips long-pointed; stem leaves 1 or few at the nodes, similar to basal.

Flowers: Inflorescence of (1) 2 to 5 (6) showy, erect to nodding flowers on slender, smooth, 2- to 2.5-cm long stalks; flowers blue to more often blue-purple, of 6 distinct, broadly elliptic to oblanceolate segments, these similar, 1-1.2 cm long, rounded to somewhat blunt, notched, abruptly bristle-tipped, the tubes slightly inflated below, 1-2 mm long; bracts 2, unequal, the outer one exceeding the flowers; filaments fused about 1/3 their length; anthers (1) 1.5-1.7 mm long, yellow.

Fruits: Capsules, egg-shaped to globe-shaped, (3) 4.5-6 (7) mm long; seeds numerous, globe-shaped to angled, black, 1-1.5 mm wide.

Sisyrinchium septentrionale Bickn. (*S. angustifolium* auct non Mill.)

northern blue-eyed-grass

HABITAT/RANGE:

Dry meadows and streambanks in the steppe and montane zones; infrequent in BC east of the Coast-Cascade Mountains; E to MB and S to WA.

DESCRIPTION:

General: Perennial tufted herb from a fibrous root; stems several, simple, flat, 2-winged, 10-30 cm tall.

Leaves: Mostly basal, the blades few, linear, 10-30 cm long, 0.8-2 mm wide, sheathing, the margins entire, the tips long-pointed; stem leaves 1 or few at the nodes, similar to basal.

Flowers: Inflorescence of 2 to 5 showy, nodding flowers on slender, smooth, 2- to 2.5-cm long stalks; flowers white to blue-violet, of 6 distinct, narrowly elliptic to oblanceolate segments, these similar, (0.7) 0.9-1.2 cm long, rounded, notched, abruptly bristle-tipped, the tubes slightly inflated below, 1-2 mm long; bracts 2, unequal, the outer one exceeding the flowers; filaments fused about 1/3 their length; anthers (1) 1.5-2.2 mm long, yellow.

Fruits: Capsules, egg-shaped to globe-shaped, 3.5-5 mm long; seeds numerous, angled, black, 0.5-1.2 mm wide.



Sisyrinchium montanum



Sisyrinchium septentrionale

JUNCACEAE⁶

- 1. Fruits 3-chambered; seeds many; leaves stiff, smooth; leaf sheaths open *Juncus*
- 1. Fruits 1-chambered; seeds 3; leaves flexible, usually hairy on the margins at the base; leaf sheaths closed *Luzula*

JUNCUS

- 1. Involucral bract resembling an extension and continuation of the stem, the inflorescence appearing as if it is on the side of the stem.
 - 2. Involucral bract channeled along the upper side *J. vaseyi*
 - 2. Involucral bract cylindrical, not channeled.
 - 3. Flowers usually only 2 or 3 (5); seeds with tail-like appendages on each end.
 - 4. Uppermost of the basal sheaths of the stems with well-developed blades, 2-7 cm long; capsules pointed *J. parryi*
 - 4. Uppermost of the basal sheaths of the stems bladeless, or with blades less than 1 cm long; capsules notched *J. drummondii*
 - 3. Flowers several or numerous; seeds cylindrical without tail-like appendages.
 - 5. Stems in dense clusters.
 - 6. Stems and lowest bracts smooth to finely grooved with 30 to 60 longitudinal ridges, green, shiny; anthers shorter than the filaments; capsules rounded at the top *J. effusus*
 - 6. Stems and lowest bracts coarsely grooved with 15 to 25 longitudinal ridges, greyish-green, dull; anthers longer than the filaments; capsules notched at the top *J. conglomeratus*
 - 5. Stems distributed along elongated rhizomes, not in dense clusters.
 - 7. Perianth 5-7 mm long; stems flattened, twisted *J. breweri*
 - 7. Perianth less than 6 mm long; stems round, usually straight.
 - 8. Stems finely grooved; sheaths dull, light brown; involucral bract nearly as long as or longer than the stem; inflorescence located about halfway between the tip of the involucral bract and the base of the stem; perianth greenish or whitish *J. filiformis*
 - 8. Stems smooth; sheaths shiny brown; involucral bract shorter than the stem; inflorescence located closer to the upper part of the plant; perianth brownish green to red-brown.
 - 9. Anthers longer than or equal to the filaments; flowers 8 to 20, brownish-green *J. balticus*
 - 9. Anthers shorter than the filaments; flowers 3 to 12, purplish-brown *J. arcticus*
 - 1. Involucral bract not forming an extension or continuation of the stem; inflorescence terminal.
 - 10. Leaf blades without cross-walls, or with the cross-walls just close to the tips.
 - 11. Plants annual.
 - 12. Flowers solitary on the leafless stem, rarely in groups of 2 *J. kelloggii*
 - 12. Flowers in a long and diffuse inflorescence with more than 1 flower *J. bufonius*
 - 11. Plants perennial.

⁶ Contributed by A. Ceska

13. Flowers either single or slightly apart, forming an open inflorescence; each flower with two scales (bractlets) at the base.
 14. Seeds with long appendages; leaves circular in cross-section with shallow grooves *J. vaseyi*
 14. Seeds lacking appendages; leaves flat, in-rolled or channeled, but not circular in cross-section.
 15. Outer perianth segments blunt, with incurved or hooded tips; leaves arising from the base to halfway up the stems; plants with short to elongated rhizomes.
 16. Anthers nearly as long as the filaments or less than 2 times as long; capsules globe- or egg-shaped, distinctly longer than the perianth *J. compressus*
 16. Anthers about 3 times the lengths of the filaments; capsules egg-shaped, equalling or just slightly exceeding the perianth *J. gerardii*
 15. Outer perianth segments pointed; leaves only from the lowest 1/3 of the stems; plants tufted.
 17. Capsules completely 3-celled, notched at the tip *J. confusus*
 17. Capsules 1-celled, squared-off at the end or broadly rounded at the tip.
 18. Ear-shaped leaf lobes very thin, translucent, pointed, longer than wide, up to 6 mm long *J. tenuis*
 18. Ear-shaped leaf lobes membranaceous, opaque or cartilaginous, wider than long, not more than 1 mm long.
 19. Ear-shaped leaf lobes more or less membranaceous or opaque, neither rigid nor glossy; perianth ascending, less than 4 mm long; bractlets shortly awned *J. interior*
 19. Ear-shaped leaf lobes cartilaginous (toenail-like), yellowish or yellowish-brown and glossy; perianth spreading, 3-5 mm long, bractlets blunt *J. dudleyi*
 13. Flowers clustered into small groups or heads, the heads either solitary, or (more often) forming a compound inflorescence without two scales (bractlets) at the base.
 20. Leaves all basal; plants less than 20 cm tall.
 21. Capsules distinctly notched; inflorescence usually 2-flowered *J. biglumis*
 21. Capsules blunt to pointed; inflorescence 3- to 5-flowered.
 22. Bracts blunt, only the lowermost with pointed tips, smaller than the flowers; capsules dark, longer than the perianth *J. triglumis*
 22. Bracts awned, longer than the flowers; capsules pale, shorter than or equal to the perianth *J. albescens*
 20. Leaves along the stems in addition to the basal leaves; stems often more than 25 cm tall.
 23. Capsules about 1.5 times longer than the perianth.
 24. Capsules 6-8 mm long, chestnut brown; anthers 1-1.5 mm long; plants with stolons and rhizomes *J. castaneus*
 24. Capsules 5-6 mm long, pale brown; anthers 0.4-0.7 mm long; plants without stolons or rhizomes *J. stygius*
 23. Capsules not longer or only slightly longer than the perianth.
 25. Seeds with long appendages; perianth deep brown with greenish midribs *J. regelii*
 25. Seeds without appendages; perianth pale brown, largely translucent-margined.

- 26. Capsules shorter than the perianth; leaves along the stems, soft *J. longistylis*
- 26. Capsules equal to or slightly longer than the perianth; leaves from the lower part of the stems or basal, stiff.
 - 27. Seeds 0.5 mm long, wedge-like, angular, widest at the top and narrowing down to the base, greyish-green; perianth segments 4.5-6 mm long *J. falcatus*
 - 27. Seeds 0.3 mm long, barrel-shaped, cylindrical, light green, widest in the middle; perianth segments 3-4 mm long *J. covillei*
- 10. Leaf blades with prominent cross-walls.
 - 28. Blades strongly flattened, the cross-walls not complete, running from the edge to about 2/3 of the leaf width.
 - 29. Capsules blunt; perianth segments shortly pointed, mostly deep brown; heads fewer than 10 *J. ensifolius*
 - 29. Capsules pointed; perianth segments tapering to narrow tips, greenish-yellow to pale brown; heads more than 10 *J. oxymetris*
 - 28. Blades rounded or a little flattened, the cross-walls complete across the full width of the leaves.
 - 30. Flowers arising singly (few in groups of 2) along the inflorescence branches *J. pelocarpus*
 - 30. Flowers in groups of 2 or more flowers.
 - 31. Early leaves threadlike, flaccid, usually submerged; stems decumbent, rooting at the nodes; inflorescence often viviparous, bearing young small plants.
 - 32. Perianth 3-4.5 mm long, narrowly lanceolate, pointed or short-awned; capsules pointed, black, 1-1.5 mm longer than the perianth *J. supiniformis*
 - 32. Perianth 2.5-3 mm long, blunt or the outer pointed; capsules blunt or notched, brown, less than 1 mm longer than the perianth *J. bulbosus*
 - 31. Early leaves stiff, not threadlike; plants erect or decumbent, but not rooting at the nodes; inflorescence not viviparous.
 - 33. Heads many-flowered, more or less globe-shaped.
 - 34. Plants with single terminal heads *J. mertensianus*
 - 34. Plants with several heads.
 - 35. Capsules egg-shaped to cylindrical, abruptly narrowed or rounded, not longer than the perianth.
 - 36. Stamens 3; anthers shorter than the filaments; perianth narrowly short-awned *J. bolanderi*
 - 36. Stamens 6; anthers longer than the filaments; perianth lanceolate to short-awned *J. nevadensis*
 - 35. Capsules uniformly tapered into short tips, longer than the perianth.
 - 37. Perianth up to 3 mm long, deep brown; rhizomes without swollen nodes *J. articulatus*
 - 37. Perianth more than 3 mm long, greenish-brown to tawny; rhizomes with swollen nodes.

- 38. Inner perianth segments shorter than the outer, 4-5 mm long; heads 1-1.5 cm when pressed *J. torreyi*
- 38. Inner perianth segments about as long as the outer ones, 3-4 mm long; heads less than 1 cm when pressed *J. nodosus*
- 33. Heads with few flowers, cone-shaped.
 - 39. Capsules twice as long as the perianth, over 5 mm long *J. supiniformis*
 - 39. Capsules less than twice as long as the perianth, less than 5 mm long.
 - 40. Perianth segments, at least the inner blunt and rounded, capsules rounded *J. alpinoarticulatus*
 - 40. Perianth segments pointed or short-awned; capsules tapered into tips.
 - 41. Inner perianth segments equal to the outer ones; seeds egg-shaped without tail-like appendages.
 - 42. Capsules longer than the perianth; perianth (2) 2.5-3 mm long; stamens 6 *J. articulatus*
 - 42. Capsules about equal to the perianth; perianth more than or equal to 3 mm long; stamens 3 *J. acuminatus*
 - 41. Inner perianth segments longer than the outer ones; seeds spindle-shaped with tail-like appendages.
 - 43. Inflorescence more than twice as tall as wide, the branches upright; heads with less than 10 flowers; capsules much longer than the perianth; seeds with tails that are not longer than 1/2 the seed bodies *J. brevicaudatus*
 - 43. Inflorescence from as wide as long to twice longer than wide, the branches spreading; heads with more than 10 flowers; capsules only slightly longer than the perianth; seeds with tails longer than 1/2 the seed bodies *J. canadensis*

Juncus acuminatus* Michx.*tapered rush****HABITAT/RANGE:**

Lakeshores, wet ditches, marshes and bogs in the lowland and montane zones; frequent in SW BC, infrequent E of the Coast-Cascade Mountains; disjunct E to ON, PQ and NS, and S to ME, MA, PA, NC, FL, MS, TX, NM, AZ and CA.

DESCRIPTION:

General: Perennial, loosely tufted herb from short rhizomes; stems erect, 40-75 cm tall.

Leaves: Located along the stem, nearly circular in cross-section, tapered, but slightly flattened, the early leaves stiff, with prominent complete cross-walls, sheaths open, with short, rounded, ear-shaped lobes.

Flowers: Inflorescence terminal, the several to many heads with 5 to 20 flowers, cone-shaped, 3-12 cm long, the branches erect; perianth segments greenish-brown, 3-3.5 mm long, pointed, the inner about equal to the outer; stamens 3; anthers 0.7-1 mm long, shorter than the filaments; involucre bract shorter than the inflorescence.

Fruits: Capsules egg-shaped, pointed, about as long as the perianth segments; seeds spindle-shaped, about 0.4 mm long, lacking tail-like appendages.

Juncus albescens* (Lange) Fern. (*J. triglumis* L. ssp. *albescens* [Lange] Hult.)*whitish rush****HABITAT/RANGE:**

Wet calcareous fens in the montane zone; rare in BC east of the Coast Mountains; N to AK, YT and NW NT and S to NM, UT, ID and OR.

DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems erect, 7-20 cm tall.

Leaves: Basal, nearly circular in cross-section, tapered, lacking cross-walls.

Flowers: Inflorescence a single, terminal head of 2 to 6 flowers, the flowers lacking bractlets; perianth segments pale brown or whitish, 3.5-5 mm long, pointed, subequal; stamens 6; anthers 0.6-1 mm long, shorter than the filaments; involucre bracts awned, longer than the flowers.

Fruits: Capsules, cylindrical, pointed, shorter than or equal to the perianth segments, pale; seeds spindle-shaped, about 1.8 mm long, with appendages at each end.

Juncus alpinoarticulatus* Chaix (*J. alpinus* Vill., *J. geniculatus* Schrank)*alpine rush****HABITAT/RANGE:**

Lakeshores, riverbanks, gravel bars, bogs and marshes from the lowland to subalpine zones; infrequent throughout BC; circumpolar, N to AK, YT and NT, E to NF and S to ME, PA, IN, IL, IA, NE, CO, UT, ID and WA; Greenland, Eurasia.

DESCRIPTION:

General: Perennial, loosely tufted herb from short rhizomes; stems erect, 15-45 cm tall.

Leaves: Located on the lower part of the stem, nearly circular in cross-section, tapered, the early leaves stiff, with prominent complete cross-walls; sheaths open, with short, pointed, ear-shaped lobes.

Flowers: Inflorescence terminal, 3-7 cm long, the few to several heads cone-shaped, mostly 3- to 6- (10-) flowered, the branches few, erect; perianth segments brown or purplish-brown, 2-2.5 mm long, generally blunt and rounded but the inner shorter and the outer longer and pointed; stamens 6; anthers shorter than the filaments; involucre bracts usually shorter than the inflorescence.

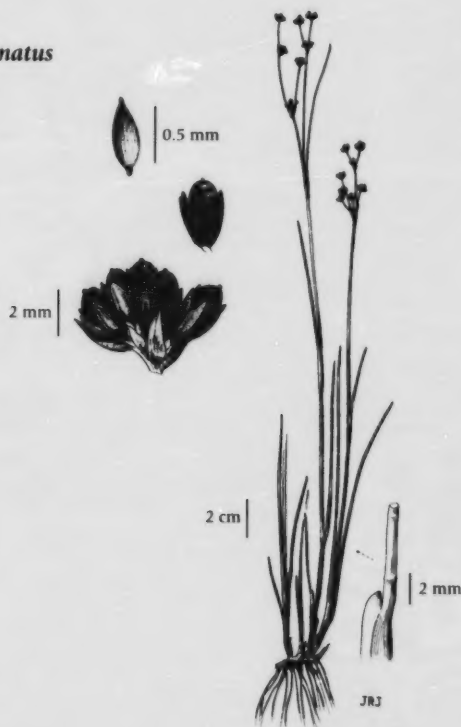
Fruits: Capsules, rounded at the tops, about as long as the perianth segments or slightly longer; seeds spindle-shaped, about 0.4 mm long, lacking appendages.



Juncus acuminatus



Juncus albens



Juncus alpinoarticulatus

Juncus arcticus* Willd. (*J. haenkei* E. Meyer = *ssp. sitchensis*)*arctic rush****HABITAT/RANGE:**

Tidal flats and lakeshores in the lowland and montane zones; *ssp. alaskanus* – rare in N BC; *ssp. sitchensis* – common in coastal BC; *ssp. alaskanus* – N to AK, YT and NT; *ssp. sitchensis* – amphiberian, N to AK, E Asia.

DESCRIPTION:

General: Perennial herb from long, creeping rhizomes; stems arising singly, not in dense clusters, round, usually straight, smooth, wiry, erect, 15-60 cm tall.

Leaves: Reduced to small sheaths at the base of the stem; sheaths shiny brown.

Flowers: Inflorescence dense, with 3 to 12 dark-coloured flowers; branches 1-7 cm long, appearing as if on the side of the stem, located above the middle, in the upper third of the stem; perianth segments dark with translucent margins, red-brown, 4-5 mm long, the outer slightly longer than the inner ones, pointed, the inner segments blunt; stamens 6; anthers shorter than the filaments; involucre bract 2-20 cm long, cylindrical, resembling a continuation of the stem.

Fruits: Capsules, with blunt tips, about equal to the perianth segments; seeds spindle-shaped, 0.8-1.1 mm long, lacking tail-like appendages.

Notes: The taxonomic relationship between this species and related *J. balticus* has not been clarified. *Juncus arcticus* is a variable species, with many infraspecific taxa described. The whole complex requires further study and more intensive collecting throughout our area. I am treating all of our plants as *ssp. sitchensis* with the exception of some plants from northern BC which belong to the rare *ssp. alaskanus*.

1. Involucre bract 10-20 cm long; inner perianth segments pointed, narrowly translucent-margined *ssp. sitchensis* Engelm.
1. Involucre bract 2-5 cm long; inner perianth segments with short awns, broadly translucent-margined *ssp. alaskanus* Hult.

Juncus articulatus* L.*jointed rush****HABITAT/RANGE:**

Lakeshores, riverbanks and disturbed soil in the lowland, steppe and montane zones; common in BC south of 55° N; circumpolar, N to AK, disjunct E to ON, PQ and NF and S to ME, PA, NC, KY, IL, MN, NE, NM, AZ and CA; Eurasia.

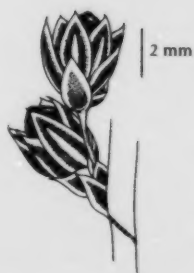
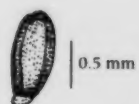
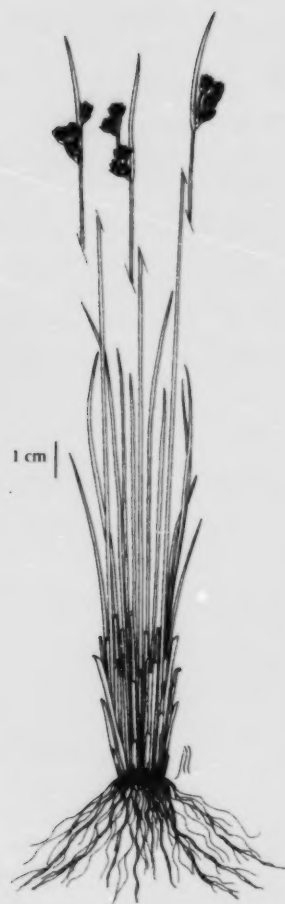
DESCRIPTION:

General: Perennial, loosely tufted herb from short rhizomes; stems often decumbent, 10-65 cm tall, often rooting at the nodes.

Leaves: Located on the lower part of the stem, nearly circular in cross-section, tapered, the early leaves stiff, with prominent complete cross-walls; sheaths open, with short, rounded, ear-shaped lobes.

Flowers: Inflorescence terminal, 7-15 cm long, open, the heads numerous, small, conic, mostly 6- to 12-flowered; perianth segments dark brown, (2) 2.5-3 mm long, pointed, the inner about equal to the outer; stamens 6; anthers shorter than the filaments.

Fruits: Capsules, tapered to the tips, slightly longer than the perianth segments; seeds barrel-like, about 0.4 mm long, lacking tail-like appendages.



Juncus arcticus ssp. *alaskanus*



Juncus articulatus

Juncus balticus Willd. (*J. arcticus* Willd. ssp. *ater* [Rydb.] Hult., *J. arcticus* ssp. *balticus* [Willd.] Hyl., *J. balticus* var. *littoralis* Engelm., *J. vallicola* Rydb.)

Baltic rush

HABITAT/RANGE:

Lakeshores and sandy river bars in the lowland, steppe and montane zones; frequent throughout BC; circumpolar, N to AK, YT and NT, E to NF and S to ME, PA, VA, OH, IN, AR, TX, NM, AZ and CA; Eurasia.

DESCRIPTION:

General: Perennial herb from long, creeping rhizomes; stems arising singly, not densely clustered, round, usually straight, smooth, wiry, erect, 40-60 cm tall.

Leaves: Reduced to small sheaths at the base of the stem; sheaths shiny brown.

Flowers: Inflorescence nodding, with 8 to 20 light-coloured flowers on branches 4-8 cm long, appearing as if on the side of the stem, located closer to the upper third of the stem; perianth segments dark with translucent margins, reddish-brown, 3.2-4.7 mm long, pointed, the outer about equal to the inner segments; stamens 6; anthers longer than or equal to the filaments; involucre bract 5-20 cm long, cylindrical, resembling a continuation of the stem, shorter than the stem.

Fruits: Capsules, with blunt tips, about equal to the perianth segments or slightly longer; seeds spindle-shaped, 0.8-1 mm long, lacking tail-like appendages.

Juncus biglumis L.

two-flowered rush

HABITAT/RANGE:

Wet seepy places, mossy ledges, gravelly shores and marshes in the subalpine and alpine zones; infrequent in BC N of 55° N; circumpolar, N to AK, YT and NT, E to PQ and S to CO; Greenland, Eurasia.

DESCRIPTION:

General: Perennial, tufted herb from short rhizomes; the stems erect, 3-20 cm tall.

Leaves: Basal, nearly circular in cross-section, tapered, lacking cross-walls.

Flowers: Inflorescence a single, terminal head of usually 2 (or 3) flowers, the flowers lacking bractlets; perianth segments dark brown with lighter tips, 2.5-3 mm long, blunt, subequal; stamens 6; anthers 0.3-0.4 mm long, shorter than the filaments; bracts blunt, longer than the flowers.

Fruits: Capsules, egg-shaped, notched, 1.5-2 times longer than the perianth segments, dark; seeds spindle-shaped, about 0.7-0.9 mm long, with short tail-like appendages at each end.

Juncus bolanderi Engelm.

Bolander's rush

HABITAT/RANGE:

Wet meadows and lakeshores in the lowland zone; infrequent in SW BC, rare in SE BC; S to CA.

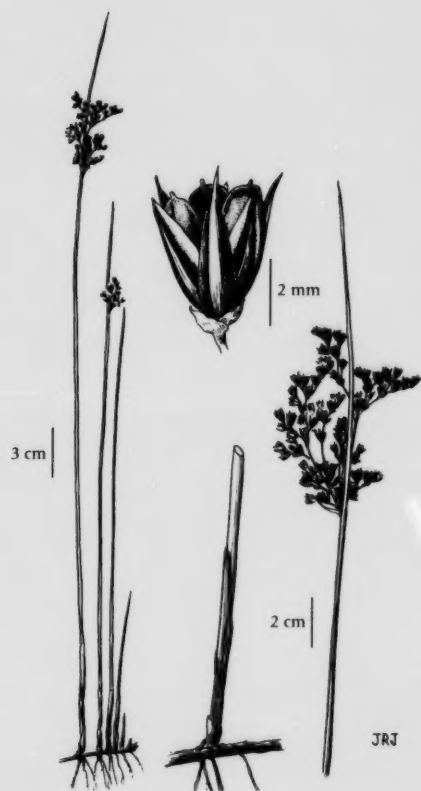
DESCRIPTION:

General: Perennial, loosely tufted herb from short rhizomes; stems erect, 40-75 cm tall.

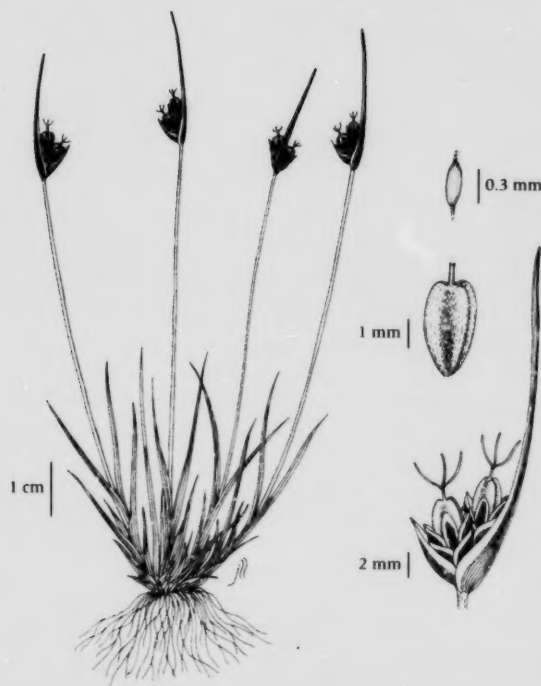
Leaves: Both basal and throughout the stem, nearly circular in cross-section, tapered, the early leaves stiff, with prominent complete cross-walls; sheaths long, open with prominent, cylindrical, ear-shaped lobes.

Flowers: Inflorescence terminal, consisting of 1 to 5 globe-shaped heads that are many-flowered; perianth segments deep brown, 3-3.5 mm long, pointed, narrowly short-awned, the inner about the same length as the outer; stamens 3; anthers 0.7 mm long, shorter than the filaments.

Fruits: Capsules, egg-shaped to cylindrical, abruptly narrowed (almost rounded), pointed, slightly shorter than the perianth segments; seeds barrel-like, about 0.4 mm long, lacking tail-like appendages.



Juncus balticus



Juncus biglumis



Juncus bolanderi

Juncus brevicaudatus* (Engelm.) Fern.*short-tailed rush****HABITAT/RANGE:**

Wet meadows, peat bogs, lakeshores and riverbanks in the lowland zone; rare in SW BC; introduced from E North America.

DESCRIPTION:

General: Perennial, tufted herb from short rhizomes; stems numerous, erect, 40-90 cm tall.

Leaves: Located on the lower parts of the stem, nearly circular in cross-section, tapered, the early leaves stiff, with prominent complete cross-walls; sheaths open with prominent, cylindrical, ear-shaped lobes.

Flowers: Inflorescence terminal, 5-20 cm long, narrow, more than twice as long as wide, the heads cone-shaped, with less than 10 flowers, the branches erect; perianth segments greenish-brown, 3.5-4.5 mm long, pointed, the inner shorter than the outer; stamens 6; anthers 0.7-1 mm long, shorter than the filaments.

Fruits: Capsules, tapered to the tips, much longer than the perianth segments; seeds spindle-shaped, about 0.4 mm long, with short, tail-like appendages on both ends, the appendages 1/2 the length of the seed bodies or less.

Juncus breweri* Engelm. (*J. lesueurii* Engelm., *J. lesueurii* var. *tracyi* Jepson)*Brewer's rush****HABITAT/RANGE:**

Mesic coastal sand dunes and exposed sandy beaches in the lowland zone; infrequent on Vancouver Island, rare on the Queen Charlotte Islands; S to CA.

DESCRIPTION:

General: Perennial herb from long creeping rhizomes; stems arising singly, not in dense clusters, wiry, flattened, usually bent down or twisted, 20-60 cm tall.

Leaves: Reduced to small sheaths at the base of the stem.

Flowers: Inflorescence globe-shaped with numerous flowers and branches, 0.5-3 cm long, appearing as if it is on the side of the stem; perianth segments dark, with translucent margins, 5-7 mm long, pointed, about equal; stamens 6; anthers twice as long as the filaments; involucre bract, 5-15 cm long, cylindrical, resembling a continuation of the stem.

Fruits: Capsules, egg-shaped with blunt tips, about equal to the perianth segments; seeds lopsided egg-shaped, 0.8 mm long.

Juncus bufonius* L. (*J. amuricus* [Maxim.] Krecz. & Gontsch., *J. bufonius* var. *occidentalis* F. J. Herm., *J. sphaerocarpus* auct. non Nees ex Funck)*toad rush****HABITAT/RANGE:**

Wet open places, disturbed sites, fields, gardens, roadsides, lakeshores, riverbanks and forest margins in all vegetation zones except the alpine; common throughout BC; cosmopolitan, N to AK, YT and NT, E to NF and S to ME, MA, PA, NC, FL, MS, TX, NM, AZ and CA; Eurasia; apparently both native and introduced in our area.

DESCRIPTION:

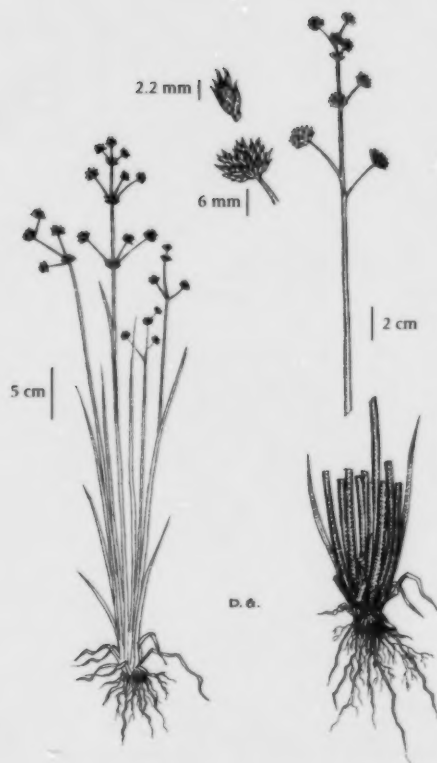
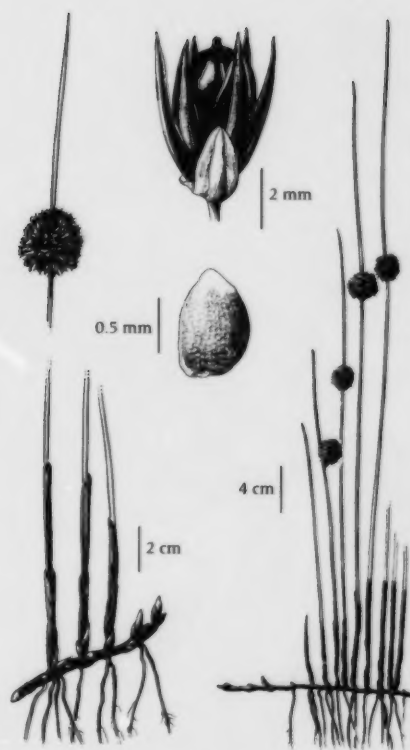
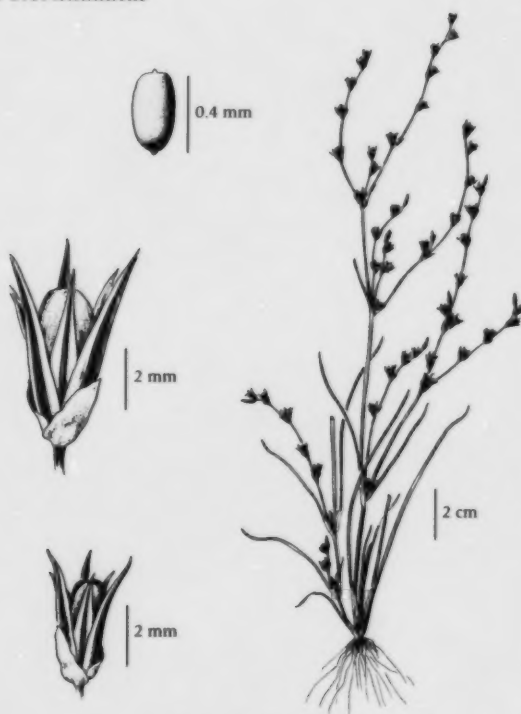
General: Annual herb from fibrous roots; stems erect or sprawling, 2-45 cm tall.

Leaves: Located on the lower part of the stem, nearly circular in cross-section, lacking cross-walls.

Flowers: Inflorescence terminal, open, commonly much branched, long, forming about 1/2 to 3/4 of the plant height, with many single flowers; perianth segments green, 2.5-6 mm long, pointed, about equal; stamens 6; anthers 0.5-1 mm long, shorter than the filaments; lower bract leaflike, nearly circular in cross-section, tapered, usually shorter than the inflorescence.

Fruits: Capsules, cylindrical to nearly globe-shaped, pointed, shorter than the perianth segments; seeds barrel-like, about 0.4 mm long, lacking tail-like appendages.

Notes: Variable species with a large number of chromosomal races. Several taxa within this complex have been described and treated as distinct species or varieties.

*Juncus brevicaudatus**Juncus breweri**Juncus bufonius*

Juncus bulbosus* L. (*J. supinus* Moench)*spreading rush****HABITAT/RANGE:**

Lakes, ponds and peat bogs in the lowland zone; rare in SW PC; disjunct E to NF and NS and S to OR; Eurasia, N Africa; probably introduced in our area.

DESCRIPTION:

General: Perennial, loosely tufted herb from fibrous roots; stems threadlike, usually submerged, 40-75 cm long, rooting at the nodes and often viviparous (producing plantlets in the inflorescence).

Leaves: Located on the lower part of the stem, threadlike, the early leaves flaccid, usually submerged, with prominent cross-walls; sheaths open, with prominent, rounded, ear-shaped lobes.

Flowers: Inflorescence terminal, 3-10 cm long, the heads with 2 or more flowers; perianth segments greenish-brown, 2.5-3 mm long, blunt or the outer ones pointed, the inner about the same length as the outer; stamens 6; anthers shorter than the filaments.

Fruits: Capsules, blunt or notched, less than 1 mm longer than the perianth, brown; seeds about 0.5 mm long, egg-shaped, lacking tail-like appendages.

Juncus canadensis* J. Gay (*J. brevicaudatus* auct. non [Engelm.] Fern.)*Canadian rush****HABITAT/RANGE:**

Wet meadows, peat bogs, lakeshores, and riverbanks in the lowland zone; rare in SW BC; introduced from eastern North America and Europe.

DESCRIPTION:

General: Perennial, tufted herb from short rhizomes; stems numerous, erect, 40-90 cm tall.

Leaves: Located on the lower part of the stem, nearly circular in cross-section, tapered, stiff, with prominent complete cross-walls; sheaths open, with short, rounded, ear-shaped lobes.

Flowers: Inflorescence terminal, conic, as wide as long to twice as long as wide, 5-20 cm long, the heads with more than 10 flowers, the branches spreading; perianth segments greenish-brown, 3.5-4.5 mm long, pointed, the inner shorter than the outer; stamens 6; anthers 0.7-1 mm long, shorter than the filaments.

Fruits: Capsules, pointed, about as long as the perianth segments or only slightly longer; seeds spindle-shaped, about 0.4 mm long, with long, tail-like appendages on both ends that are more than 1/2 of the seed bodies.

Notes: This species was erroneously treated as *J. brevicaudatus* in Ceska (1994).

Juncus castaneus* Sm. (*J. leucochlamys* Zing. ex Krecz. = ssp. *leucochlamys*)*chestnut rush****HABITAT/RANGE:**

Moist to wet gravel bars, bogs, fens, lakeshores and marshes in the montane and subalpine zones; frequent in BC north of 55° N, E of the Coast Mountains and in the Rocky Mountains; circumpolar, N to AK, YT and NT, E to NF and S to NM; Eurasia.

DESCRIPTION:

General: Perennial herb from long, creeping rhizomes or stolons; stems erect, 10-35 cm tall.

Leaves: Located on the lower parts of the stem, flat, lacking cross-walls.

Flowers: Inflorescence of 1 to 3, dark, long-stalked, terminal heads of 3 to 10 flowers; perianth segments chestnut-brown, 3.5-6.5 mm long, egg-shaped, the outer segments equal to the inner ones or slightly longer, pointed, the inner segments blunt; stamens 6; anthers 1-1.5 mm long, shorter than the filaments; lowest bracts leaflike, about as long as the inflorescence, the upper bracts awnlike and shorter than the flowers.

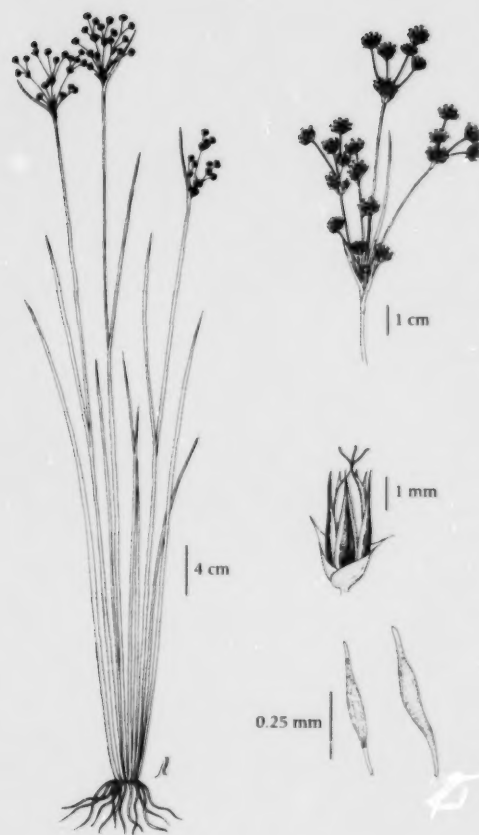
Fruits: Capsules, pointed, 1.5 times longer than the perianth segments, dark chestnut brown; seeds spindle-shaped, about 0.9 mm long, with tail-like appendages at each end.

Notes: Two subspecies have been recognized in W North America. *Juncus castaneus* ssp. *leucochlamys* has not been reported from BC, but can be expected near the YT border:

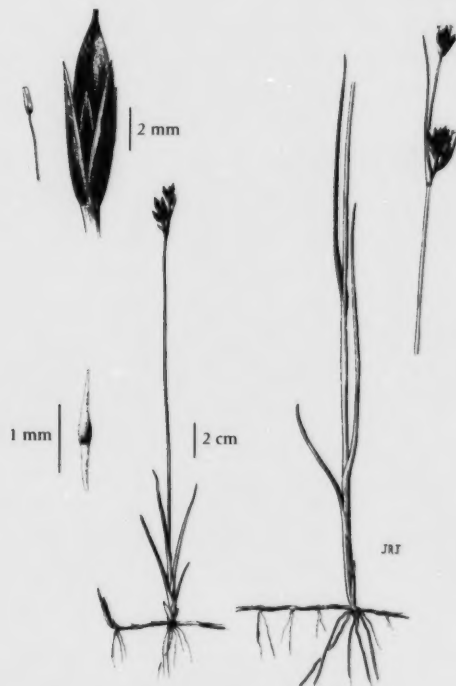
1. Heads 1 to 3, dark, unstalked or short-stalked; lowest bract short ssp. *castaneus*
1. Heads several, pale, long-stalked; lowest bract long ssp. *leucochlamys* (Zing. ex Krecz.) Hult.



Juncus bulbosus



Juncus canadensis



Juncus castaneus ssp. *castaneus*

Juncus compressus Jacq.

compressed rush

HABITAT/RANGE:

Wet depressions and lakeshores in the lowland and steppe zones; rare in SW and SC BC; introduced from Europe.

DESCRIPTION:

General: Perennial, loosely tufted herb from short to elongate rhizomes; stems erect, 10-45 cm long, bluish-green.

Leaves: Located on the lower parts of the stem, flat, lacking cross-walls.

Flowers: Inflorescence terminal, 3-15 cm long, the branches spreading; perianth segments dark brown with greenish midribs and whitish margins, 2-3 mm long, rounded, the outer blunt with incurved or hooded tips, the inner about the same length as the outer; stamens 6; anthers 0.5-1 mm long, subequal to or 1-2 times longer than the filaments; lowermost bract as long as or longer than the inflorescence, the flowers each with 2 involucre bractlets.

Fruits: Capsules, globe- to egg-shaped, rounded, distinctly longer than the perianth segments; seeds egg-shaped, 0.4-0.5 mm long, lacking tail-like appendages.

Juncus confusus Cov.

Colorado rush

HABITAT/RANGE:

Moist meadows and forest openings in the lowland, steppe and montane zones; rare in S BC; E to SK and S to SD, NM, AZ and CA.

DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems to 1 mm wide, erect, 20-50 cm tall.

Leaves: Located on the lower 1/3 of the stem, narrow (to 1 mm wide), flattened, lacking cross-walls; sheaths open, with short, 0.3-0.7 mm long, ear-shaped lobes.

Flowers: Inflorescence terminal, congested, 3- to 25-flowered, 1-3 cm wide, the flowers each with 2 involucre bractlets; perianth segments tawny to blackish with brownish midribs, 3-4.5 mm long, lanceolate, pointed, the inner about the same length as the outer; stamens 6; anthers 0.3-0.6 mm long, shorter than the filaments; first bract usually much longer than the inflorescence.

Fruits: Capsules, notched above, broadly cylindrical, rounded, shorter than the perianth segments, completely 3-celled; seeds lopsided elliptical to pear-shaped, about 0.4-0.6 mm long, lacking tail-like appendages.

Juncus conglomeratus L. (*J. effusus* var. *conglomeratus* [L.] Engelm., *J. effusus* var. *compactus* auct. non Lej. & Court.)
compact rush

HABITAT/RANGE:

Wet disturbed sites and pastures in the lowland zone; rare in coastal BC; introduced from Europe.

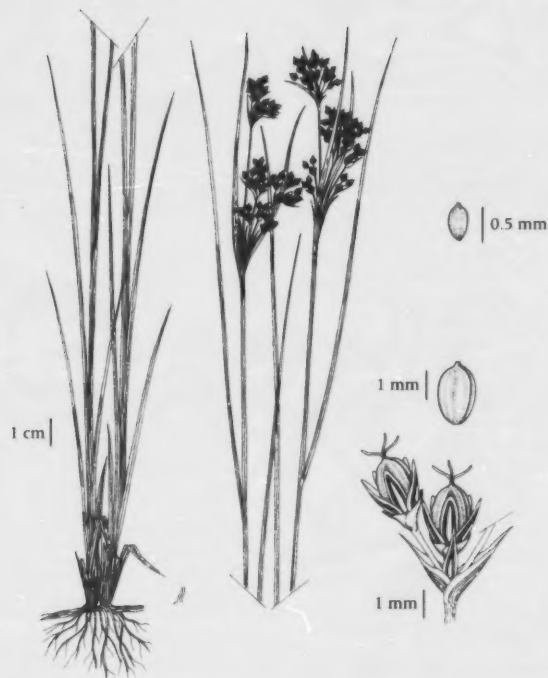
DESCRIPTION:

General: Perennial herb from compact rhizomes; stems in dense clusters, coarsely longitudinally grooved with 10 to 20 ridges, the epidermal cells on the ridges distinctly larger than the others, 20-60 cm tall.

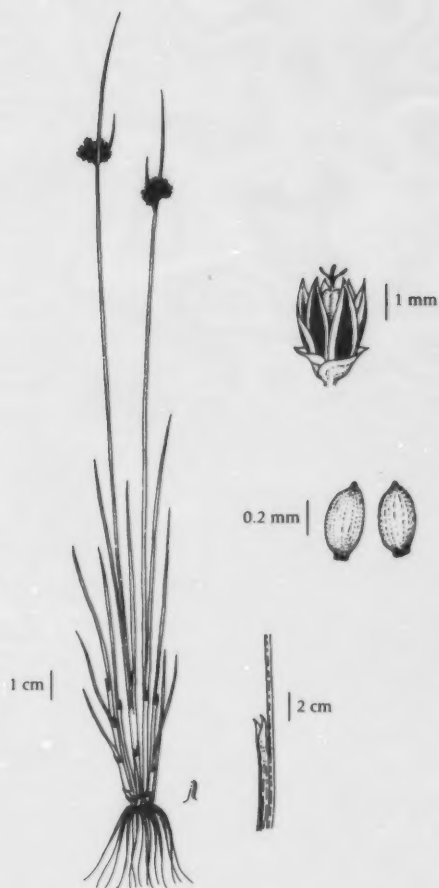
Leaves: Reduced to small sheaths at the base of the stem.

Flowers: Inflorescence globe-shaped, with numerous flowers on branches 0.5-3 cm long, appearing as if on the side of the stem; perianth segments reddish-brown, 4-6 mm long, pointed, about equal; stamens 3; anthers about as long as the filaments; involucre bract 3-5 cm long, cylindrical, resembling a continuation of the stem, coarsely longitudinally grooved with 10 to 20 ridges, the epidermal cells on the ridges distinctly larger than the others.

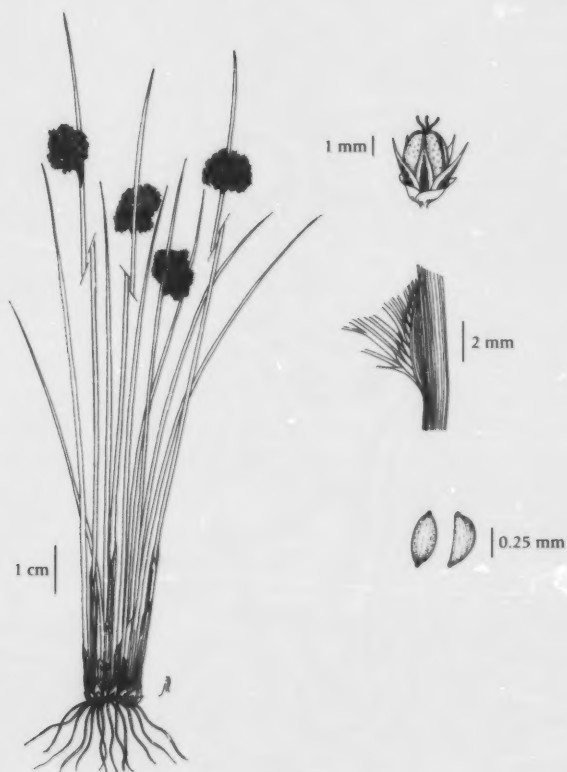
Fruits: Capsules, with small depressions on the tops, slightly shorter than the perianth segments; seeds ellipsoid, 0.5 mm long, lacking tail-like appendages.



Juncus compressus



Juncus confusus



Juncus conglomeratus

Juncus covillei Piper

Coville's rush

HABITAT/RANGE:

Lakeshores and gravel banks in the lowland zone; infrequent in SW BC; S to CA.

DESCRIPTION:

General: Perennial herb from long creeping rhizomes; stems erect, 10-30 cm tall.

Leaves: Located on the lower part of the stem, flat, stiff, lacking complete cross-walls.

Flowers: Inflorescence of 1 to 6, terminal heads of 3 to 7 flowers, the flowers lacking bractlets; perianth segments brown, largely translucent-margined, 3-4 mm long, egg-shaped, pointed; stamens 6; anthers 0.9-1.4 mm long, about equal to the filaments; lowest bracts leaflike, longer than the flowers, upper bracts awnlike and shorter than the inflorescence.

Fruits: Capsules, egg-shaped, notched, equal to or slightly longer than the perianth segments, dark brown; seeds barrel-shaped, about 0.3 mm long, lacking tail-like appendages.

Notes: The habit of this species is similar to *J. falcatus*. The most reliable identification character is the shape and size of seeds.

Juncus drummondii E. Mey.

Drummond's rush

HABITAT/RANGE:

Mesic to moist rocky slopes, heaths, snowbed sites, streambanks, open forests and meadows in the subalpine and alpine zones; common throughout BC; N to YT and NT, E to AB and S to NM and NV.

DESCRIPTION:

General: Perennial tufted herb from short rhizomes; stems wiry, erect, 15-40 cm tall.

Leaves: Reduced to sheaths with short awns at the base of the stem, or the uppermost of the basal sheaths with blades less than 1 cm long.

Flowers: Inflorescence a loose head with 1 to 4, nearly terminal flowers, appearing as if it is on the side of the stem; perianth segments green to brown, pointed, 5-7 mm long, the inner ones slightly shorter; stamens 6; anthers about 1.5 mm long, shorter than the filaments; involucre bract 1-3 cm long, cylindrical, resembling a continuation of the stem.

Fruits: Capsules, cylindrical, notched, longer than the perianth segments; seeds spindle-shaped, 0.5 mm long with long, tail-like appendages at each end of the seed.

Notes: Two varieties occur in W North America. Our BC material has been identified as var. *drummondii* but var. *subtriflorus* can be expected in S BC:

1. Capsules usually at least 1 mm longer than the perianth segments; perianth 5-6 mm long var. *subtriflorus* (E. Mey.) C.L. Hitchc.
1. Capsules about equal to the perianth segments; perianth 6-7 mm long var. *drummondii*

Juncus dudleyi Wieg.

Dudley's rush

HABITAT/RANGE:

Dry to moist meadows, pastures, roadsides and ditches, mostly on disturbed soil in the steppe and montane zones; infrequent in SC and SE BC; N to AK, YT and NT, E to NF and S to ME, MA, PA, VA, SC, MS, TX, NM, AZ and CA.

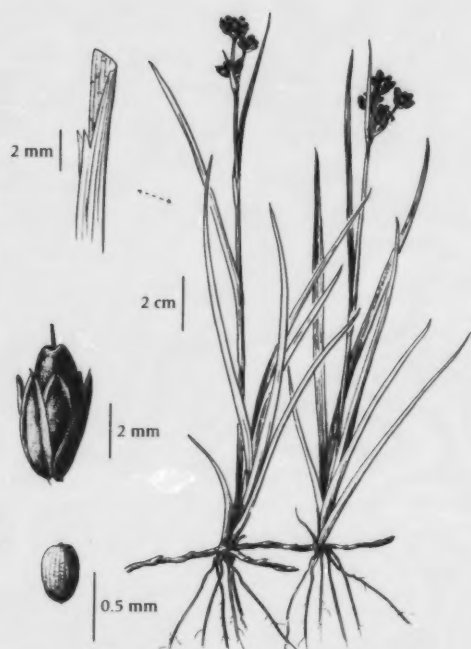
General: Perennial, loosely tufted herb from compact rhizomes; stems 1 to 15, erect, 25-100 cm long.

Leaves: Located on the lower 1/3 of the stem, narrow, flattened, lacking cross-walls; sheaths open, with short, cartilaginous, yellowish or yellowish-brown, glossy, ear-shaped lobes.

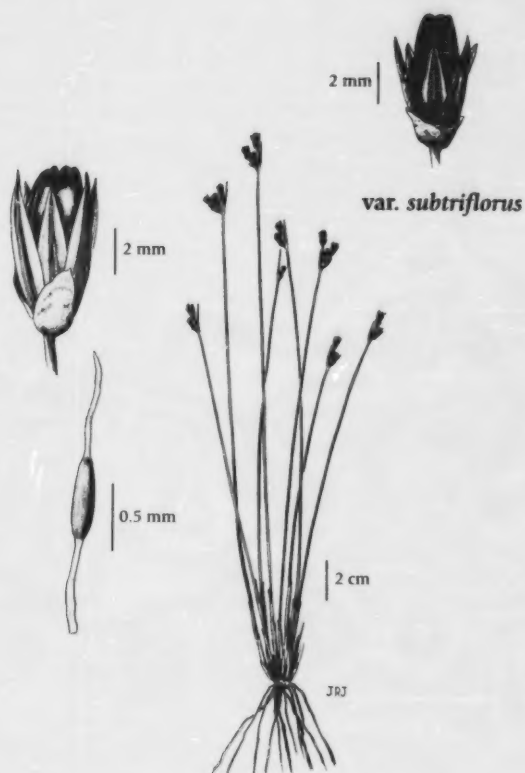
Flowers: Inflorescence terminal, 5-15 cm long, the branches ascending, the flowers each with 2 blunt involucre bracts; perianth segments green, 3-5 mm long, pointed, spreading, the inner about the same length as the outer; stamens 6; anthers 0.6-0.9 mm long, shorter than or almost equal to the filaments.

Fruits: Capsules, 1-celled, rounded, about the same length as the perianth segments or slightly shorter; seeds egg-shaped, about 0.4-0.6 mm long, lacking tail-like appendages.

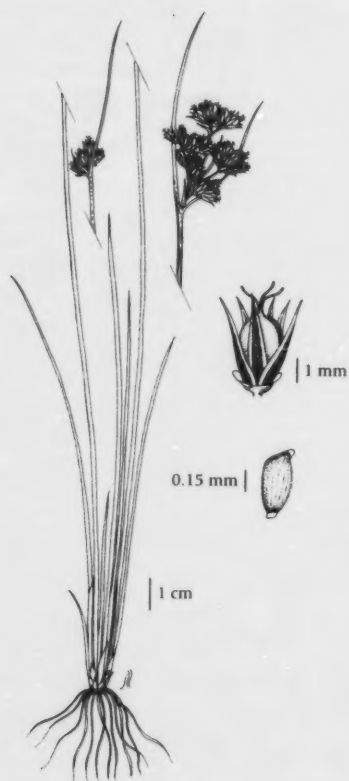
Notes: This is a member of the *J. tenuis* complex, whose taxonomy and distribution in British Columbia has not been studied.



Juncus covillei



Juncus drummondii var. *drummondii*



Juncus dudleyi

Juncus effusus L.

common rush

HABITAT/RANGE:

Moist to wet disturbed places, pastures, fields, ditches, clearings, forest margins, marshes and peat bogs in the lowland, steppe, and montane zones; common W of the Coast-Cascade Mountains; N to AK and S to MT, ID, AZ and CA; Eurasia.

DESCRIPTION:

General: Perennial, strongly tufted herb in large, dense clusters from compact rhizomes; stems smooth or finely lined with 30 to 60 longitudinal ridges, 30-120 cm tall.

Leaves: Reduced to short sheaths at the base of the stem.

Flowers: Inflorescence with numerous flowers and branches, 3-12 cm long, appearing as if on the side of the stem; perianth segments green or light brown, 3-6 mm long, pointed, subequal; stamens 3; anthers about as long as the filaments; involucre bract 5-25 cm long, cylindrical, resembling a continuation of the stem, smooth or finely lined with 30 to 60 longitudinal ridges.

Fruits: Capsules, egg-shaped, rounded on the tops, slightly shorter than the perianth segments; seeds ellipsoid, 0.5 mm long, lacking tail-like appendages.

Notes: Variable species with several varieties recognized in our area:

1. Perianth segments greenish with little or no brownish borders, stiff when dry var. *pacificus* Fern. & Wieg.
1. Perianth segments deep brown with green midribs, soft when dry.
 2. Uppermost sheaths closed, leathery, lustrous, and chestnut brown throughout var. *gracilis* Hook.
 2. Uppermost sheaths looser, membranaceous, dull greenish-brown above var. *brunneus* Engelm.

Juncus ensifolius Wikstr. (*J. saximontanus* A. Nels., *J. xiphoides* E. Meyer var. *montanus* Engelm. = var. *montanus*; *J. tracyi* Rydb., *J. xiphoides* var. *triandrus* Engelm. = var. *ensifolius*.)

dagger-leaf rush

HABITAT/RANGE:

Wet, open, sandy soil in marshes, peat bogs, lakeshores and margins of creeks and rivers, from the lowland and steppe to subalpine zones; frequent in BC south of 55° N, infrequent N; amphiberian, N to AK and YT, E to SK and disjunct to ON and PQ, and S to CO, AZ and CA; E Asia.

DESCRIPTION:

General: Perennial herb from long rhizomes; stems erect, 30-60 cm tall.

Leaves: Located on the lower half of the stem, strongly flattened, compressed laterally (iris-like), with partial cross-walls that run from the edges to about 2/3 of the leaf widths; sheaths open, with or without short, ear-shaped lobes.

Flowers: Inflorescence terminal, with 1 to 10 heads, the heads globe-shaped, 5- to many-flowered; perianth segments greenish-brown to brownish-purple, 3-4 mm long, pointed, subequal; stamens 3 or 6; anthers 0.7-1 mm long, shorter than, or equal to the filaments.

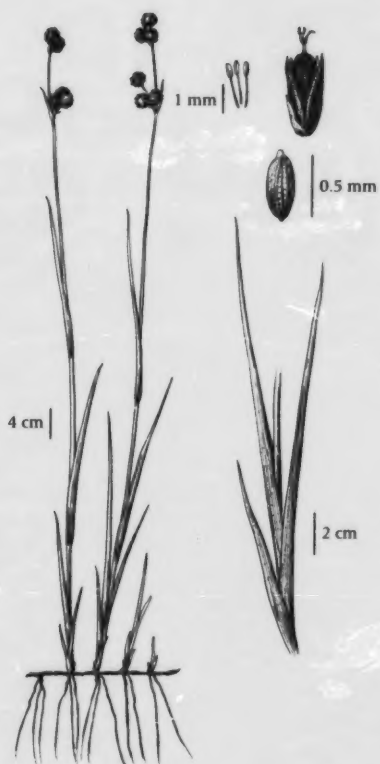
Fruits: Capsules, narrowly cylindrical, rounded, blunt, about as long as the perianth segments; seeds egg-shaped, about 0.5 mm long, lacking tail-like appendages.

Notes: This is a variable species and includes two varieties that are sometimes treated as distinct species:

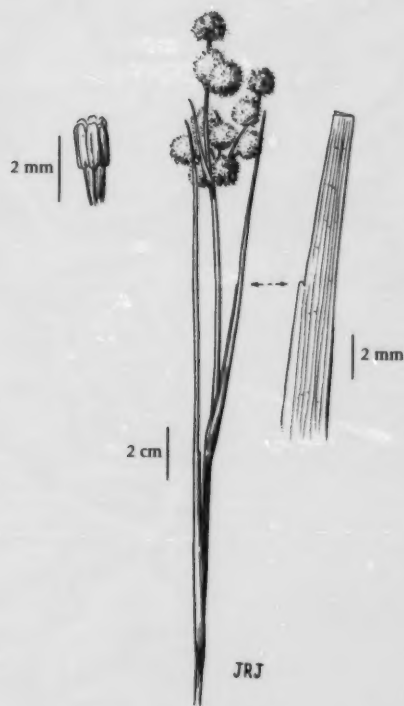
1. Heads 2 to 5, purplish-brown; stamens 3; blades 3-6 mm wide, sheaths lacking ear-shaped lobes var. *ensifolius*
1. Heads 5 or more, pale brown; stamens 6; blades 2-4 mm wide, sheaths with ear-shaped lobes var. *montanus* (Engelm.) C.L. Hitchc.



Juncus effusus var. *pacificus*



Juncus ensifolius var. *ensifolius*



Juncus ensifolius var. *montanus*

Juncus falcatus E. Mey. (*J. sitchensis* [Buch.] Hult.)**sickle-leaved rush****HABITAT/RANGE:**

Wet rocky or sandy lakeshores and streambanks, upper tideflats and open soil in peat bogs in the lowland and montane zones; frequent in BC west of Coast-Cascade Mountains; amphiberian, N to AK and S to CA; E Asia and Australia.

DESCRIPTION:

General: Perennial herb from long creeping rhizomes; stems erect, 10-30 cm tall.

Leaves: Located on the lower part of the stem, flat, stiff, lacking cross-walls.

Flowers: Inflorescence of 1 to 3 terminal heads of 5 to 15 flowers, the flowers lacking bractlets; perianth segments dark brown with wide green midribs, 4-6 mm long, egg-shaped, pointed or awned; stamens 6; anthers 1-1.6 mm long, about equal to the filaments; lowest bracts leaflike, longer than the inflorescence, the upper bracts awnlike and shorter than the inflorescence.

Fruits: Capsules, egg-shaped, blunt or notched, equal to or slightly shorter than the perianth segments, dark; seeds wedge-like, angular, widest at the tips and narrowing to the bases, about 0.7 mm long, lacking tail-like appendages.

Juncus filiformis L.**thread rush****HABITAT/RANGE:**

Moist meadows and wet sandy lakeshores from the lowland and steppe to subalpine zones; infrequent throughout BC; circumpolar, N to AK, YT, and NT, E to NF and S to MA, WV, PA, MI, WI, MN, NE, NM, UT, ID and OR; Eurasia, Patagonia.

DESCRIPTION:

General: Perennial herb from elongated rhizomes; stems arising singly, not in dense clusters, round, usually straight, smooth, finely grooved, 15-40 cm tall.

Leaves: Reduced to small sheaths at the base of the stem; sheaths dull, light brown.

Flowers: Inflorescence a head-like cluster, with numerous flowers on branches 0.5-3 cm long, appearing as if on the side of the stem, located about halfway between the tip of the involucre bract and the base of the stem; perianth segments pale green or whitish, 3-4 mm long, pointed, subequal; stamens 6; anthers shorter than the filaments; involucre bract 7-20 cm long, cylindrical, resembling a continuation of the stem, subequal to longer than the stem.

Fruits: Capsules, globe-shaped, slightly shorter than the perianth segments; seeds egg-shaped, 0.4-0.5 mm long.

Juncus gerardii Loisel.**Gerard's rush****HABITAT/RANGE:**

Wet tidal flats in the lowland zone and moist streambanks in the montane zone; infrequent in SW BC, disjunct E to MB, ON, PQ and NE, and S to MA, PA, VA, KY, MO, KS, CO, UT and WA; Eurasia, New Zealand.

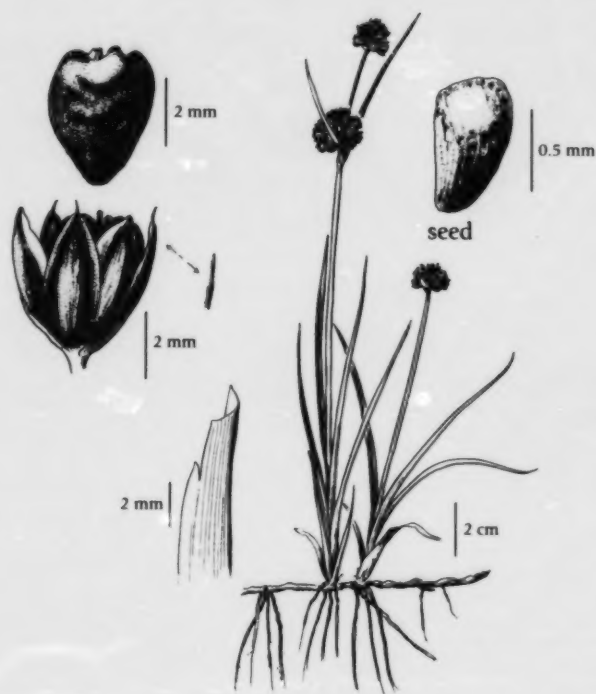
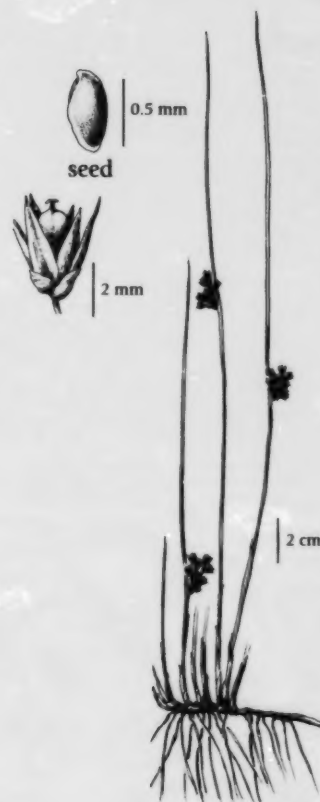
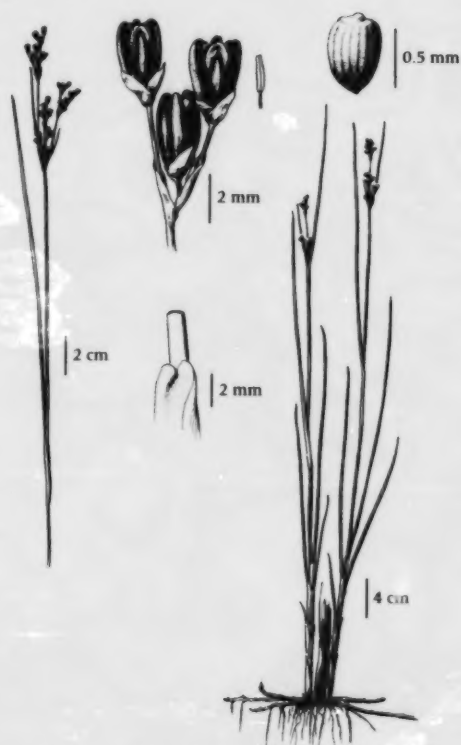
DESCRIPTION:

General: Perennial, loosely tufted herb from short to elongate, extensive rhizomes; stems erect, 25-75 cm long.

Leaves: Located on the lower parts of the stem extending at least halfway up, flat, 1.5-3 mm wide, lacking cross-walls, with ear-shaped lobes.

Flowers: Inflorescence terminal, 3-15 cm long, loosely branched, the branches ascending, the flowers each with 2 involucre bractlets; perianth segments dark brown with greenish midribs, 3-4.5 mm long, rounded, blunt, with incurved, hooded tips, the inner about the same length as the outer; stamens 6; anthers 1.3-1.6 mm long, about 3 times the length of the filaments.

Fruits: Capsules, egg-shaped, equal to or just slightly surpassing the perianth segments; seeds pear-shaped, about 0.5-0.6 mm long, lacking tail-like appendages.

*Juncus falcatus**Juncus filiformis**Juncus gerardii*

***Juncus interior* Wieg.**

inland rush

HABITAT/RANGE:

Dry to moist pastures, mostly on disturbed soil in the lowland, steppe and montane zones; infrequent in S BC; N to AK, YT and NT, E to PQ and NS and S to PA, TN, LA, TX, NM, AZ, ID and WA.

DESCRIPTION:

General: Perennial, loosely tufted herb from fibrous roots; stems erect, 15-75 cm long.

Leaves: Located on the lower 1/3 of the stem, narrow, flattened, lacking cross-walls; sheaths open, with short (not more than 1 mm long), wider than long, membranaceous to nearly so, whitish, opaque, ear-shaped lobes.

Flowers: Inflorescence terminal, 5-15 cm long, the bracts ascending, longer than the inflorescence, perianth segments green, 3-4 mm long, pointed, the inner about the same length as the outer; stamens 6; anthers 0.4-0.6 mm long, shorter than the filaments.

Fruits: Capsules, broadly rounded, 1-celled, about the same length as the perianth segments; seeds ellipsoid, about 0.4-0.7 mm long, lacking tail-like appendages.

Notes: This is a member of the *Juncus tenuis* complex, whose taxonomy and distribution in BC has not been studied.

***Juncus kelloggii* Engelm.**

Kellogg's rush

HABITAT/RANGE:

Seasonally wet depressions and vernal pools in the lowland zone; rare in SW BC, known only from Victoria; S to CA.

DESCRIPTION:

General: Annual herb from a short root; stems erect, 0.4-4 cm tall.

Leaves: Basal, bristlelike, nearly circular in cross-section, tapered, lacking cross-walls.

Flowers: Mostly single or in clusters of 2 on the leafless stem, terminal; perianth segments brown or reddish-brown, 2.5-3.5 mm long, pointed, subequal; stamens 3; anthers 0.4 mm long, shorter than the filaments; bracts scalelike and inconspicuous.

Fruits: Capsules, blunt, as long as the perianth segments; seeds barrel-like, with prominent longitudinal ribs and cross-walls, about 0.4 mm long, lacking tail-like appendages.

***Juncus longistylis* Torr.**

long-styled rush

HABITAT/RANGE:

Marshes and fens in the steppe and montane zones; infrequent in BC east of the Coast Cascade Mountains; E to NF and S to MI, MN, NE, NM, AZ and CA.

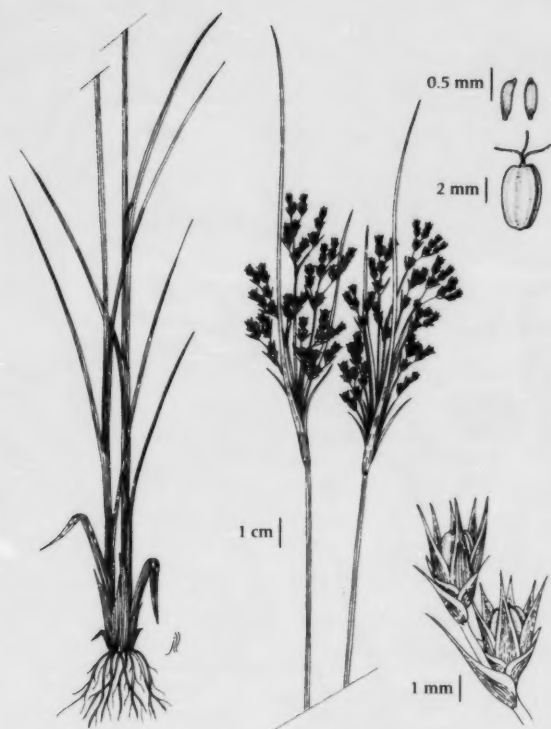
DESCRIPTION:

General: Perennial herb from long creeping rhizomes; stems slightly compressed, 20-60 cm long.

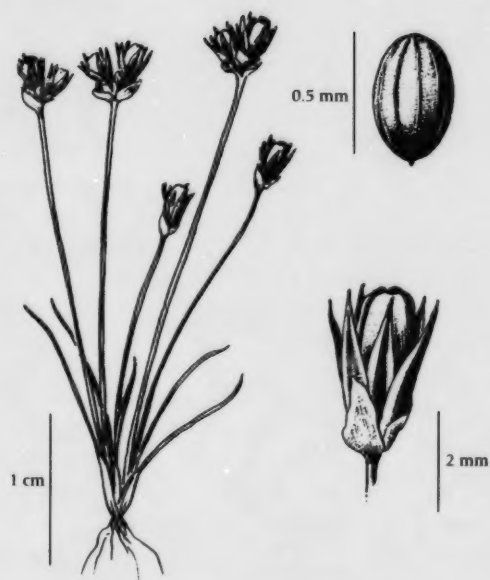
Leaves: Mostly basal but 1 to 3 from the lower parts of the stem, flat, soft, 1.5-3 mm wide, 10-30 cm long, lacking cross-walls.

Flowers: Inflorescence of 1 to 5 heads at the top of the stem, each of them with 3 to 10 flowers, the flowers lacking involucre bractlets; perianth segments pale brown with green midribs, largely translucent-margined, 5-6 mm long, lanceolate, the outer segments slightly shorter than the inner ones; stamens 6, anthers 1.2-2 mm long, longer than the filaments; involucre bract shorter than the inflorescence.

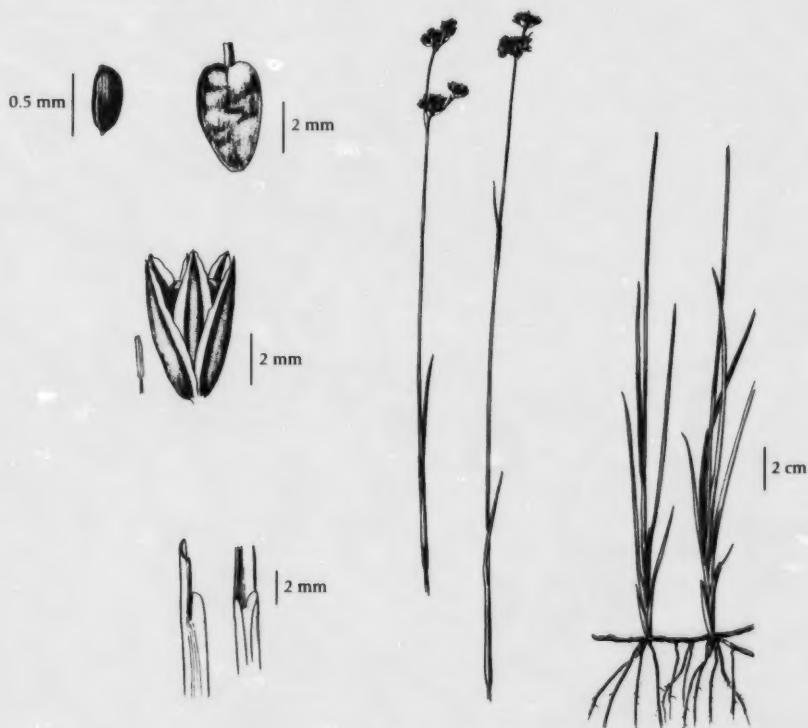
Fruits: Capsules, cylindrical to egg-shaped, notched, shorter than the perianth; seeds lopsided egg-shaped, 0.4-0.6 mm long, tail-like appendages lacking.



Juncus interior



Juncus kelloggii



Juncus longistylis

Juncus mertensianus Bong.**Mertens' rush**

HABITAT/RANGE:

Moist to wet meadows, pond edges, grassy streambanks, snowbed sites and open boggy forests from the montane to alpine zones; common throughout BC; amphiberian, N to AK, YT and NT, E to AB and S to SD, NM, AZ and CA; Japan.

DESCRIPTION:

General: Perennial herb from elongated rhizomes; stems arising singly, erect, 15-25 cm tall.

Leaves: Located on the lower part of the stem, nearly circular in cross-section, tapered, the early leaves stiff, with prominent complete cross-walls; sheaths open, with rounded, ear-shaped lobes.

Flowers: Numerous, in single, terminal, hemispheric heads; perianth segments dark brown, 3-4.5 mm long, pointed, the inner about the same length or shorter than the outer; stamens 6; anthers 0.6 mm long, shorter than the filaments; involucre bract solitary, short, equalling or exceeding the inflorescence.

Fruits: Capsules, cylindrical to egg-shaped, rounded or with small depressions, slightly shorter than the perianth segments; seeds barrel-like, about 0.4 mm long, lacking tail-like appendages.

Juncus nevadensis S. Wats. (*J. badius* Suksd., *J. suksdorfii* Rydb.)**Sierra rush**

HABITAT/RANGE:

Wet lakeshores and stream margins in the lowland, steppe, and montane zones; infrequent in the Chilcotin-Cariboo region, rare elsewhere; E to AB and S to NM, AZ, and CA.

DESCRIPTION:

General: Perennial herb from elongated rhizomes; stems arising singly or few together, erect, 20-75 cm tall.

Leaves: Located on the lower part of the stem, nearly circular in cross-section, tapered, the early leaves stiff, with prominent complete cross-walls; sheaths open, with short, rounded, ear-shaped lobes.

Flowers: Inflorescence terminal, 3-12 cm long, with (3) 5 to 30, more or less globe-shaped heads, the heads each with many flowers, the branches few, erect; perianth segments dark brown, 3-4.5 mm long, lanceolate to short-awned, pointed, the inner about the same length as the outer; stamens 6; anthers 1-2 mm long, longer than the filaments; involucre bract shorter than inflorescence.

Fruits: Capsules, egg-shaped to cylindrical, pointed, abruptly narrowed, shorter than the perianth segments; seeds barrel-like, about 0.4 mm long, lacking appendages.

Notes: This is a variable species and several infraspecific taxa (often treated as distinct species) have been described from WA and OR.

Juncus nodosus L.**tuberous rush**

HABITAT/RANGE:

Lakeshores and marshes in the lowland, steppe and montane zones; infrequent throughout BC, mostly E of the Coast-Cascade Mountains; N to AK, YT and NT, E to NE, and S to MA, PA, VA, IN, CO, UT, NV and CA.

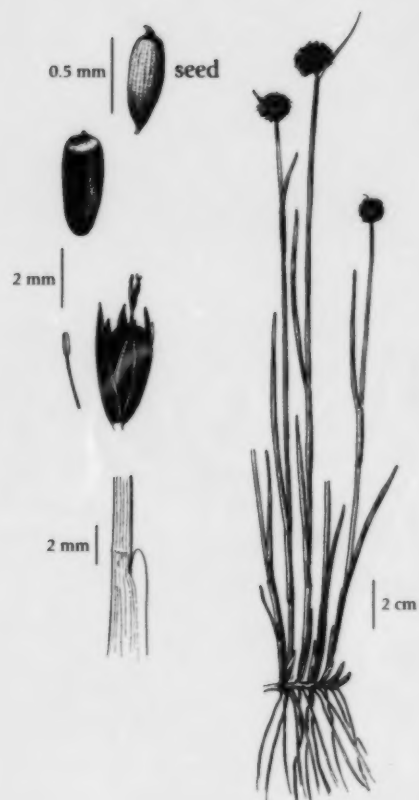
DESCRIPTION:

General: Perennial herb from elongated rhizomes, the rhizomes with swollen nodes; stems arising singly, erect, 20-40 cm tall.

Leaves: Located along the length of the stem, nearly circular in cross-section, tapered, the early leaves stiff, with prominent complete cross-walls; sheaths open, with minute, pointed, ear-shaped lobes.

Flowers: Inflorescence terminal, 3-5 cm long, with (1) 3- to 15-flowered, globe-shaped heads, the heads less than 1 cm wide when pressed, the branches erect; perianth segments greenish-brown to tawny, 3-4 mm long, pointed, the inner about the same length as the outer; stamens 6; anthers 0.6-0.7 mm long, shorter than the filaments; involucre bract longer than inflorescence.

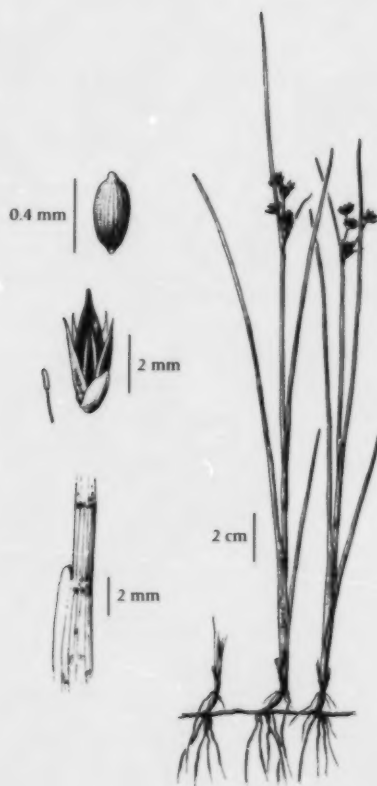
Fruits: Capsules, narrowly three-angled, cone-shaped, pointed, uniformly tapered into short tips, longer than the perianth segments; seeds barrel-like, about 0.4 mm long, lacking tail-like appendages.



Juncus mertensianus



Juncus nevadensis



Juncus nodosus

Juncus oxymeris Engelm.

pointed rush

HABITAT/RANGE:

Wet meadows and riverbanks in the lowland zone; rare in SW BC; S to CA.

DESCRIPTION:

General: Perennial herb from long rhizomes; stems erect, 40-90 cm tall.

Leaves: Located on the lower halves of the stem, 2-6 mm wide, strongly flattened, compressed laterally (iris-like), with partial cross-walls that run from the edge to about 2/3 of the leaf width; sheaths open, with minute, pointed, ear-shaped lobes.

Flowers: Inflorescence terminal, loose, with 10 to 70 heads, the heads mostly 3- to 12-flowered; perianth segments greenish-yellow to pale brown, 3-4 mm long, pointed, short-awned, subequal; stamens 6; anthers 1-1.5 mm long, slightly longer than the filaments; involucre bract much shorter than the inflorescence.

Fruits: Capsules, egg-shaped, tapering into long points, longer than the perianth segments; seeds ellipsoid, about 0.5 mm long, lacking tail-like appendages.

Juncus parryi Engelm.

Parry's rush

HABITAT/RANGE:

Dry meadows and rocky slopes in the subalpine and alpine zones; frequent in BC south of 55° N, rare W of the Coast-Cascade Mountains; E to AB and S to CO, UT, NV and CA.

DESCRIPTION:

General: Perennial tufted herb from short rhizomes; stems wiry, erect, 10-40 cm tall.

Leaves: Basal, short, nearly circular in cross-section, tapered, the uppermost of the basal sheaths with well-developed blades 2-7 cm long.

Flowers: Inflorescence a subterminal, loose head with 1 to 4 flowers, appearing as if on the side of the stem; perianth segments green to brown, subequal, pointed, 5-7 mm long; stamens 6; anthers about 1.5 mm long, shorter than the filaments; involucre bracts 2-5 cm long, cylindrical, resembling a continuation of the stem.

Fruits: Capsules, pointed, about the same length as the perianth segments; seeds spindle-shaped, 0.6 mm long, with long, tail-like appendages at each end.

Juncus pelocarpus E. Mey.

brown-fruit rush

HABITAT/RANGE:

Peat bogs and disturbed wetlands in the lowland zone; infrequent in SW BC; introduced from E North America.

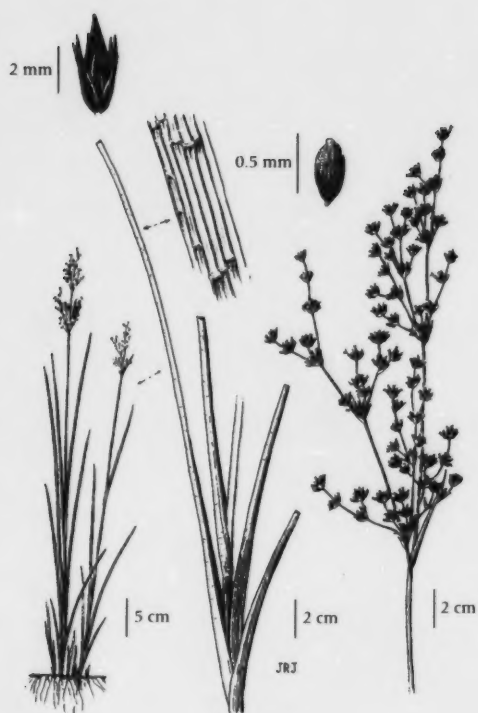
DESCRIPTION:

General: Perennial, loosely tufted herb from short rhizomes; stems 10-45 cm tall, rooting at the nodes, viviparous (producing plantlets in the inflorescence).

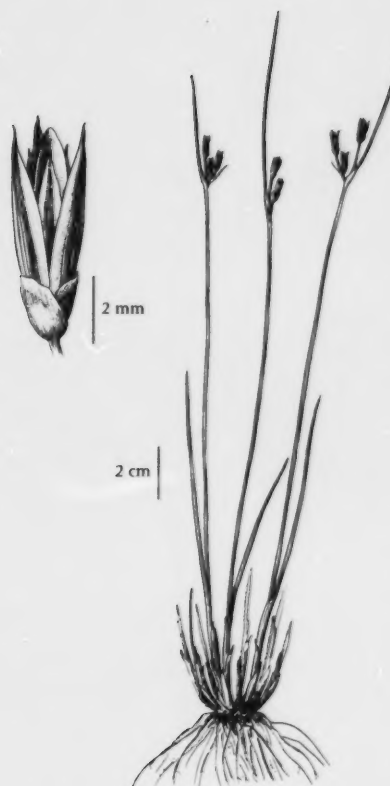
Leaves: Located on the lower part of the stem, nearly circular in cross-section, tapered, with prominent complete cross-walls; sheaths open, with short, rounded, ear-shaped lobes.

Flowers: Inflorescence terminal, 7-15 cm long, open, with flowers mostly arising singly (rarely in groups of 2) along the numerous branches; perianth segments green, tinged with red, 2.5-3 mm long, short-pointed to round, the inner slightly longer than the outer; stamens 6; anthers much longer than the filaments.

Fruits: Capsules, pointed, longer than the perianth segments; seeds egg-shaped, about 0.5 mm long, lacking tail-like appendages.



Juncus oxymeris



Juncus parryi



Juncus pelocarpus

Juncus regelii Buch.

Regel's rush

HABITAT/RANGE:

Wet streambanks and marshes in the steppe and montane zones; rare in BC in and E of the Coast-Cascade Mountains and S of 55° N; E to AB and S to WY, UT, NV and CA.

DESCRIPTION:

General: Perennial herb from rhizomes; stems erect, 10-40 cm tall.

Leaves: Located on the lower part of the stem, flat, lacking cross-walls; sheath with short ear-shaped lobes or lobes lacking.

Flowers: Inflorescence terminal, of 1 to 5 hemispheric heads, each of them with 7 to 15 flowers; perianth segments chestnut-brown with lighter midribs, 4-6 mm long, pointed, subequal; stamens 6; anthers about 1-1.4 mm long, slightly longer than the filaments; bracts shorter than the inflorescence.

Fruits: Capsules, cylindrical to egg-shaped, rounded at the tops, about as long as the perianth segments, dark; seeds spindle-shaped, the body about 1.5 mm long, with tail-like appendages at each end.

Juncus stygius L. (*J. stygius* var. *americanus* Buch.)

bog rush

HABITAT/RANGE:

Pond margins and peat bogs in the lowland and montane zones; rare in coastal BC north of 50° N and in EC BC; circumpolar, N to AK, YT and NT, E to NF and S to ME, MI, WI and MN; Eurasia.

DESCRIPTION:

General: Perennial, loosely tufted herb; stems erect, 10-25 cm tall.

Leaves: Located on the lower part of the stem, nearly circular in cross-section, tapered, lacking cross-walls.

Flowers: Inflorescence of 1 to 3, terminal heads of 2 to 5 flowers, the flowers lacking involucre bractlets; perianth segments green or light brown with wide translucent margins, 3.5-4.5 mm long, egg-shaped, subequal, blunt; stamens 6; anthers 0.4-0.7 mm long, shorter than the filaments; bracts leaflike, usually slightly longer than the inflorescence.

Fruits: Capsules, blunt, 1.5 times longer than the perianth segments, pale brown to straw-coloured, 5-6 mm long; seeds spindle-shaped, about 1.2-1.4 mm long, with tail-like appendages at each end.

Notes: Plants from N America and E Asia have sometimes been separated into var. *americanus*. The taxonomic status of this variety is doubtful.

Juncus supiniformis Engelm. (*J. oreganus* S. Wats.)

spreading rush

HABITAT/RANGE:

Shallow water, wet mud, lakeshores and open peat bogs in the lowland and montane zones; common in BC west of the Coast-Cascade Mountains; N to AK and S to CA.

DESCRIPTION:

General: Perennial, loosely tufted herb from short rhizomes; stems erect or spreading, 15-75 cm long, often submerged, rooting at the nodes, often also viviparous (producing plantlets in the inflorescence).

Leaves: Located on the lower part of the stem, nearly circular in cross-section, tapered, the early leaves threadlike, flaccid, other leaves firm and erect, usually submerged, with prominent, complete crosswalls, sheaths open, with short, rounded, ear-shaped lobes.

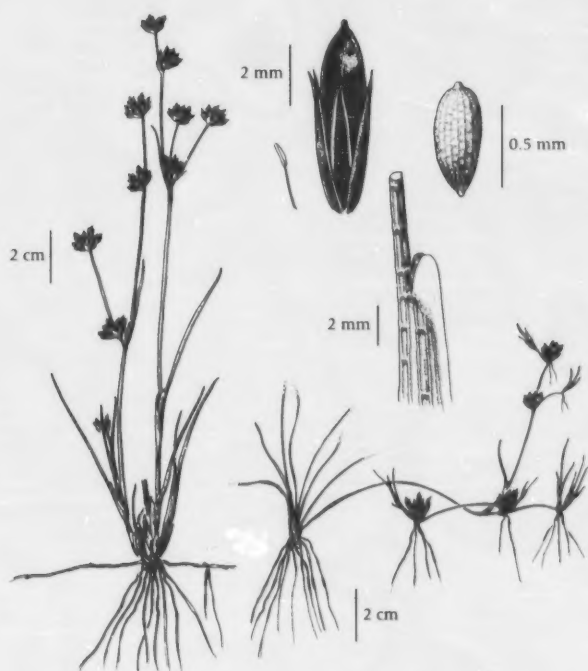
Flowers: Inflorescence terminal, 5-15 cm long, in 2 to 6 heads of 3 to 10 flowers, the branches ascending; perianth segments dark brown or reddish-brown, 3-4.5 mm long, narrowly lanceolate, pointed, or short-awned, the inner about the same length as the outer; stamens 6; anthers 0.7-1 mm long, shorter than the filaments.

Fruits: Capsules, narrowly cylindrical, pointed, 1-1.5 mm longer than the perianth segments, black; seeds spindle-shaped, about 0.6-0.7 mm long, lacking tail-like appendages.



Juncus regelii

Juncus stygius



Juncus supiniformis

Juncus tenuis Willd. (*J. macer* S.F. Gray)

slender rush

HABITAT/RANGE:

Dry to moist meadows, pastures, roadsides and ditches, mostly on disturbed soil in the lowland, steppe and montane zones; common in BC south of 55° N, infrequent in N BC; N to AK, YT and NT, E to NF and S to ME, MA, PA, NC, FL, MS, TX, NM, AZ and CA.

DESCRIPTION:

General: Perennial, loosely tufted herb from fibrous roots; stems erect, 15-75 cm long.

Leaves: Located on the lower 1/3 of the stem, narrow (0.5-1.5 mm wide), flattened, lacking cross-walls; sheaths open, up to 6 mm long, longer than wide, thin, translucent, pointed, ear-shaped lobes.

Flowers: Inflorescence terminal, 5-15 cm long, with few to numerous flowers, the flowers each with 2 involucre bractlets, the bracts ascending and longer than the inflorescence; perianth segments green, 3-4.5 mm long, pointed, the inner about the same length as the outer; stamens 6; anthers 0.6-0.8 mm long, shorter than the filaments.

Fruits: Capsules, broadly cylindrical, rounded, 1-celled, about the same length as the perianth segments; seeds ellipsoid, about 0.4-0.6 mm long, lacking tail-like appendages.

Notes: This species complex was treated as a single, variable species in Ceska (1994) but in this manual I have segregated *Juncus confusus*, *J. dudleyi*, and *J. interior* as separate species.

Juncus torreyi Coville

Torrey's rush

HABITAT/RANGE:

Moist riverbanks and lakeshores in the steppe zone; infrequent in S BC east of the Coast-Cascade Mountains; E to PQ and NS and S to ME, MA, PA, NC, GA, MS, TX, NM, AZ and CA.

DESCRIPTION:

General: Perennial herb from elongated rhizomes, the rhizomes swollen at the nodes; stems arising singly, erect, 40-85 cm tall.

Leaves: Located on the lower part of the stem, nearly circular in cross-section, tapered, the early leaves stiff, with prominent complete cross-walls; sheaths open with short, rounded, ear-shaped lobes.

Flowers: Inflorescence terminal, congested, of 3- to many-flowered, globe-shaped heads that are 1-1.5 cm wide when pressed; perianth segments greenish-brown to tawny, 4.5-5 mm long, pointed, the inner slightly shorter than the outer; stamens 6; anthers 0.7-1 mm long, shorter than the filaments; involucre bracts usually exceeding the inflorescence.

Fruits: Capsules, narrowly three-angled, conical, tapered into long tips, about as long as the perianth segments or slightly longer; seeds barrel-like, about 0.4 mm long, lacking tail-like appendages.

Juncus triglumis L.

three-flowered rush

HABITAT/RANGE:

Wet mossy areas and snowbed sites in the subalpine and alpine zones; infrequent in N BC E of the Coast-Cascade Mountains; circumpolar, N to AK, YT and NT; Eurasia.

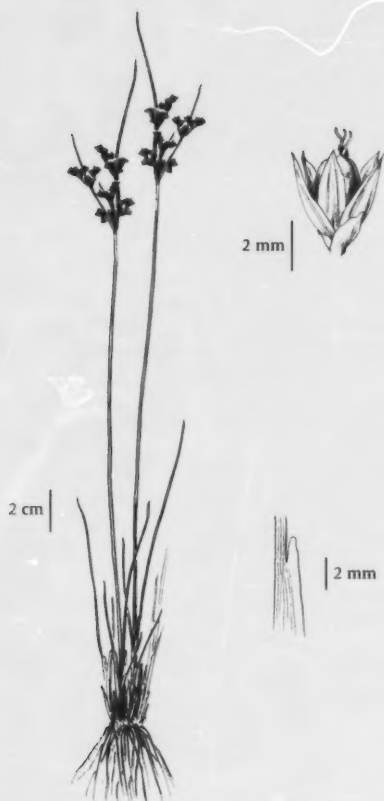
DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems erect, 7-20 cm tall.

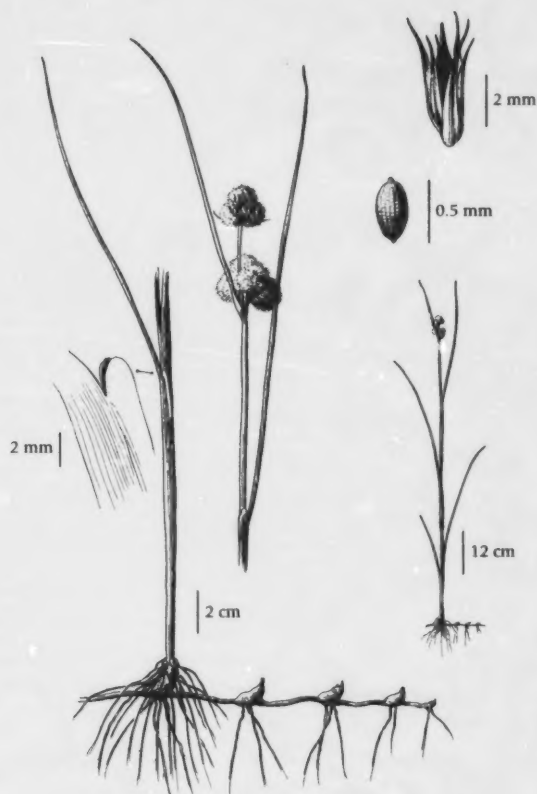
Leaves: All basal, nearly circular in cross-section, tapered, lacking cross-walls.

Flowers: Inflorescence a single, terminal head of 2 to 6 flowers, the flowers lacking involucre bractlets; perianth segments pale brown or whitish, 3.5-5 mm long, pointed, subequal; stamens 6; anthers 0.6-1 mm long, shorter than the filaments; involucre bracts blunt, shorter than the flowers, only the lowermost with pointed tips.

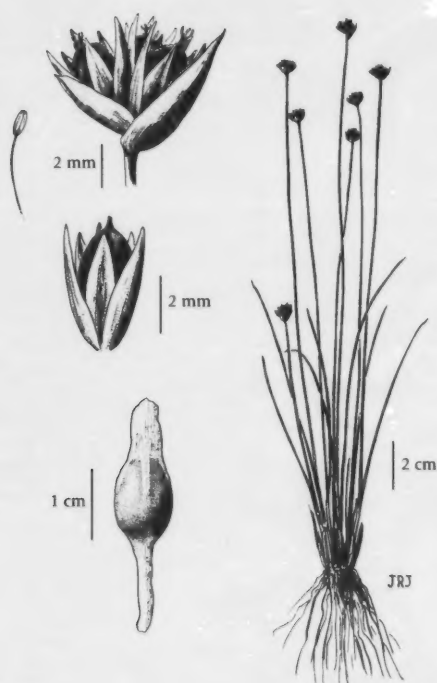
Fruits: Capsules, cylindrical, pointed, longer than the perianth segments, dark reddish-brown; seeds spindle-shaped, about 0.9 mm long, with tail-like appendages at each end.



Juncus tenuis



Juncus torreyi



Juncus triglumis

Juncus vaseyi Engelm.

Vasey's rush

HABITAT/RANGE:

Dry to moist shorelines and meadows in the steppe and montane zones; infrequent in BC E of the Coast Cascade Mountains; E to NF and S to ME, VT, IN, IL, IA and CO.

DESCRIPTION:

General: Perennial, tufted herb from fibrous roots; stems erect, 20-70 cm tall.

Leaves: Located on the lower part of the stem, nearly circular in cross-section, tapered, or grooved on the upper sides; sheaths with short, rounded ear-shaped lobes.

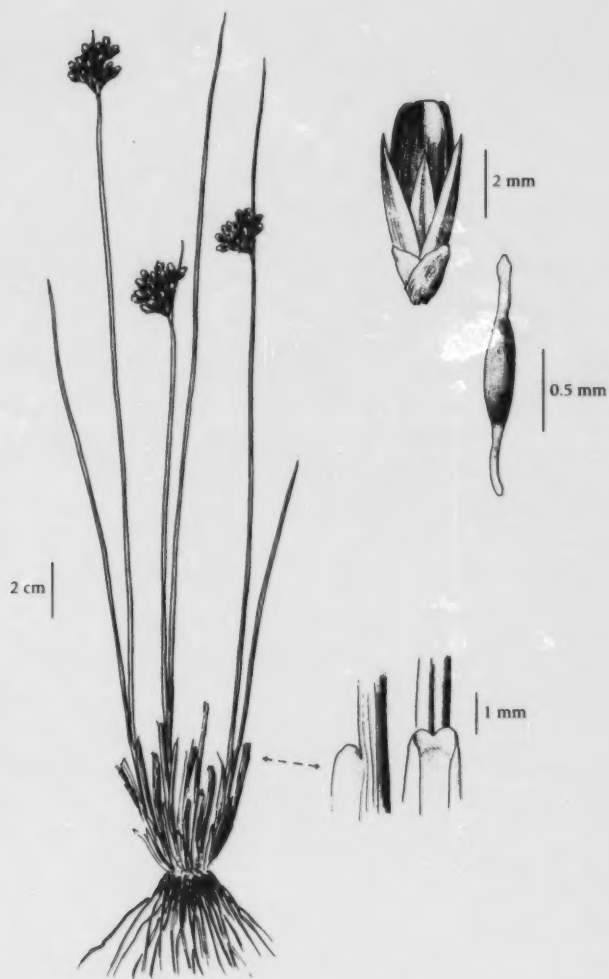
Flowers: Inflorescence a terminal cluster of 10 to 50 flowers, appearing as if it is on the side of the stem; perianth segments greenish, 3.5-5 mm long, pointed, about equal; stamens 6; anthers about 0.8 mm long, about as long as the filaments; involucre bract grooved along the upper side, overtopping the inflorescence, resembling a continuation of the stem.

Fruits: Capsules, cylindrical, blunt or notched at the tops, longer than the perianth segments, dark; seeds spindle-shaped, about 0.8-1.2 mm long, with tail-like appendages at each end.

LUZULA⁷

1. Inflorescence with solitary flowers or with flowers in groups of 2 or 3, not forming small heads.
 2. Flowers always solitary on long branches; inflorescence umbel-like *L. rufescens*
 2. Most of the flowers in clusters of 2 or 3; inflorescence a loose compound cyme, not umbel-like.
 3. Perianth segments 2.5-3 mm long; anthers 1.2-1.5 mm long; capsules 2.8-3.8 mm long, egg-shaped, with beaks up to 1 mm long *L. hitchcockii*
 3. Perianth segments usually shorter than 2.5 mm long; anthers less than 1 mm long; capsules shorter than 2.5 mm long, elliptical or rounded but never egg-shaped, with short or indistinct beaks.
 4. Plants usually less than 30 cm tall; stem leaves 3, up to 5 mm wide; bracts and bractlets strongly fringed with long hairs *L. piperi*
 4. Plants usually more than 30 cm tall; stem leaves (3) 4 or more, 3-10 mm wide; bracts entire to slightly fringed, bractlets entire to deeply cut, but never strongly fringed with hairs.
 5. Stems with distinctly reddish colour at the lowermost internodes; stem leaves lanceolate, pointed, green, shiny and thin; perianth segments very pointed, scarcely translucent, with distinct middle nerves; capsules pale brown to straw-coloured *L. fastigiata*
 5. Stems without reddish colour or with an indistinct reddish tinge at the very base; stem leaves broadly linear to lanceolate, pointed, bluish or greyish-green, dull, thick to thin; perianth segments translucent, the middle nerves fairly distinct; capsules usually blackish-brown *L. parviflora*
1. Inflorescence with flowers in heads, spikes or in small clusters, most of the clusters with more than 4 flowers.
 6. Inflorescence simple, with 1 spike-like drooping head; perianth segments tapering into long awns *L. spicata*
 6. Inflorescence usually of several small heads on stiff stalks or numerous heads on spreading stalks in an open inflorescence; perianth segments not awned, pointed, or narrowing abruptly into short awns.
 7. Bractlets strongly fringed, usually longer than 1/2 of the perianth segments; lower bract poorly developed.
 8. Leaves ending with swollen tips; plants densely tufted *L. nivalis*
 8. Leaves narrow at the tips; plants creeping or loosely tufted.

⁷ Contributed by A. Ceska & J. Kirschner



Juncus vaseyi

- 9. Basal sheaths straw-brown, dull; flower clusters pale brown to straw-brown *L. kjellmaniana*
- 9. Basal sheaths brown to purplish or reddish, usually shining; flower clusters dark to blackish-brown.
 - 10. Outer cluster of flowers on recurved stalks; perianth segments narrowly lanceolate; capsules egg-shaped or elliptical, pointed; basal sheaths reddish, dull; seeds dark brown *L. arcuata*
 - 10. Outer clusters on erect stalks or almost unstalked; perianth segments broadly lanceolate; capsules broadly egg-shaped, short abrupt-pointed; basal sheaths reddish-brown, shiny; seeds pale brown *L. confusa*
- 7. Bractlets scarcely fringed with a few hairs, less than 1/2 of the length of the perianth segments; lower bract leaflike, well-developed.
 - 11. Flower clusters becoming loose at the base with some flowers more or less remote.
 - 12. Perianth segments pale to dark brown; styles 0.6-1.2 mm long; inflorescence branches arching *L. subsessilis*
 - 12. Perianth segments green to pale brown; styles less than 0.6 mm long; inflorescence branches straight *L. comosa*
 - 11. Flower clusters dense up to the base, without remote basal flowers.
 - 13. Plants from creeping rhizomes and runners *L. campestris*
 - 13. Plants densely tufted, without runners.
 - 14. Inner perianth segments shorter than the outer ones; styles much shorter than the ovaries *L. groenlandica*
 - 14. Inner and outer perianth segments of about equal length; styles slightly shorter to longer than the ovaries *L. multiflora*

***Luzula arcuata* (Wahlenb.) Sw. ssp. *unalaschcensis* (Buch.) Hult. (*L. unalaschcensis* [Buch.] Satake)**
 curved wood-rush

HABITAT/RANGE:

Dry to moist meadows in the subalpine and alpine zones; infrequent throughout BC, except absent in NE BC; amphiberingian, N to AK, YT and NT, E to AB and S to MT and WA; E Asia.

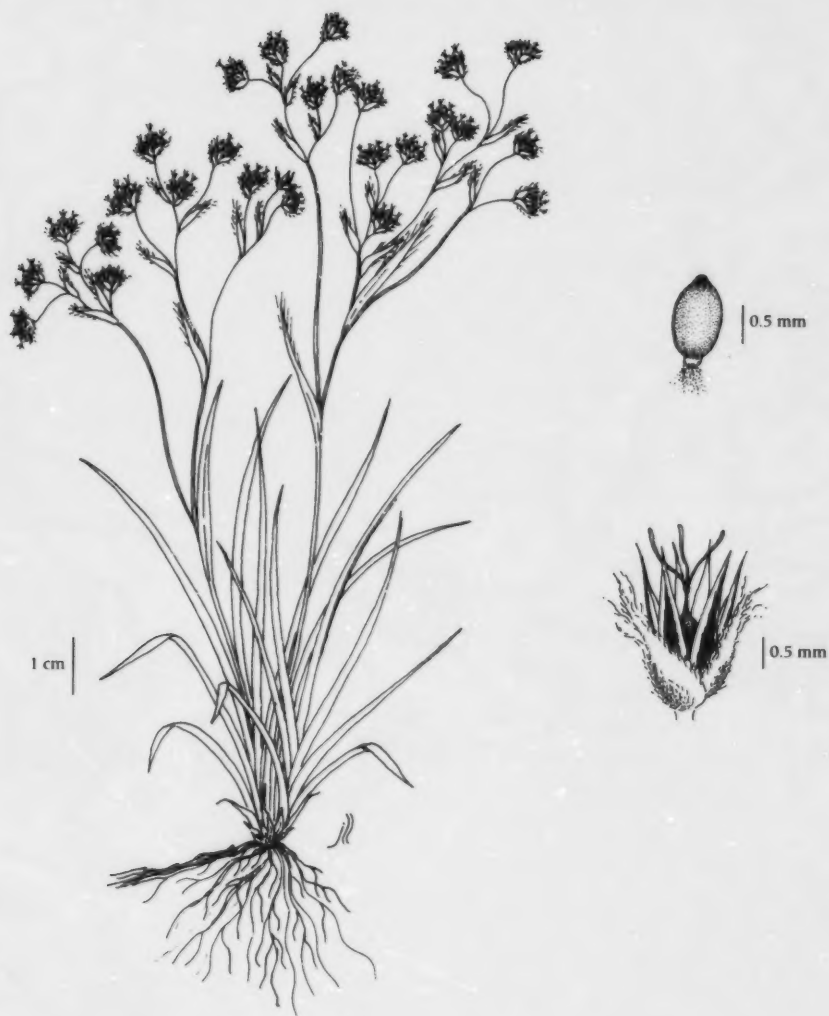
DESCRIPTION:

General: Perennial, loosely tufted herb from short rhizomes; stems 10-25 cm tall.

Leaves: Flat or channeled, sparsely fringed with fine hairs, about 5-15 cm long, 1.5-3 mm wide, gradually tapering to sharp tips; basal sheaths reddish-brown, dull.

Flowers: Inflorescence open, with 5 to 10, dark to blackish brown, dense clusters of 3 to 6 flowers on long, spreading stalks, the outer clusters on arching stalks; perianth segments brown, 2-3 mm long, narrowly lanceolate, pointed, the inner about the same length as the outer; stamens 6; anthers 0.4-0.6 mm long, about the same length as the filaments; bractlets strongly fringed with coarse hairs, nearly equal or sometimes surpassing the flowers; lower bract poorly developed.

Fruits: Capsules, ellipsoid, pointed, shorter than the perianth segments; seeds cylindrical to egg-shaped, dark brown, 1-1.2 mm long, with minute appendages, with a few short threads at the base.



Luzula arcuata ssp. *unalaschcensis*

Luzula campestris* (L.) DC.*field wood-rush****HABITAT/RANGE:**

Moist lawns in the lowland zone; rare in SW BC, known only from Courtenay and possibly the lower Fraser valley; introduced from Europe.

DESCRIPTION:

General: Perennial herb from long, creeping rhizomes and stolons; stems 5-25 cm tall.

Leaves: Flat, fringed with fine hairs, 2-5 cm long, 2-3.5 mm wide, gradually tapering to the tips; sheaths green.

Flowers: Inflorescence dense, with 2 to 7 clusters on stiff stalks, each cluster with 3 to 10 flowers, without remote basal flowers; perianth segments green to dark brown or chestnut-brown, 2.5-4.5 mm long, egg-shaped, pointed or short-awned, the inner about the same length as the outer; stamens 6; anthers 1.2-1.8 mm long, much longer than the filaments; bractlets scarcely fringed with fine to coarse hairs, shorter than the flowers and 1/2 the length of the perianth segments; lower bract leaflike, well developed, shorter than the inflorescence.

Fruits: Capsules, egg-shaped, blunt, about the same length as the perianth segments; seeds rounded, slightly elongated, 0.9-1.2 mm long, with basal appendages.

Notes: The name "*L. campestris*" has been applied to a number of members of *Luzula* section *Luzula*. When applied in a strict sense, it corresponds to the taxon that has long rhizomes and stolons.

Luzula comosa* E. Mey. (*L. multiflora* ssp. *comosa* [E. Mey.] Hult.)*Pacific wood-rush****HABITAT/RANGE:**

Mesic open woods, coniferous forests and meadows in the lowland zone; frequent in coastal BC; N to AK, S to CA.

DESCRIPTION:

General: Perennial tufted herb from fibrous roots, without stolons; stems 15-60 cm tall.

Leaves: Flat, fringed with fine hairs, 3-15 cm long, 3-6 mm wide, with blunt tips; sheaths green.

Flowers: Inflorescence with about 1 to 7 elongated clusters on stiff, straight branches, each cluster with 6 to 14 flowers, the base of the clusters loose, the basal flowers remote; perianth segments pale green to pale brownish, 2-5 mm long, egg-shaped, pointed or short-awned, the inner about the same length as the outer; stamens 6; anthers 0.6-1.2 mm long, longer than the filaments; bractlets fringed with fine to coarse hairs, shorter than the flowers; lower bracts leaflike, well developed, from shorter to longer than the inflorescence.

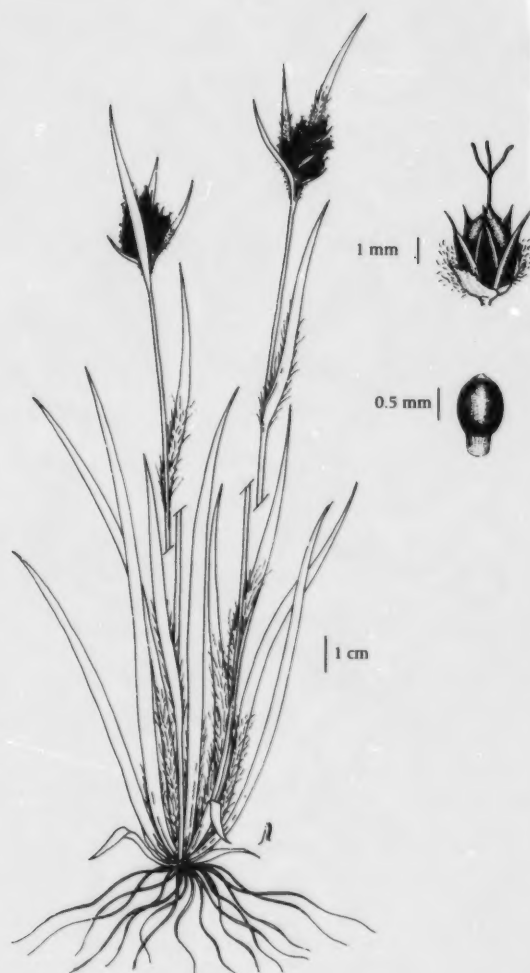
Fruits: Capsules, egg-shaped, blunt, shorter to longer than the perianth segments; seeds spindle-shaped, 1.1-1.4 mm long, with short, tail-like appendages.

Notes: Two varieties can be distinguished in BC:

1. Inflorescence usually congested; styles 0.4-0.5 mm long; anthers 0.6-1 mm long var. *comosa*
1. Inflorescence usually composed of stalked clusters; styles 0.5-0.7 mm long; anthers 0.8-1.4 mm long var. *laxa* Buch.



Luzula campestris



Luzula comosa var. *comosa*

Luzula confusa* Lindeb.*northern wood-rush****HABITAT/RANGE:**

Dry to moist rocky cliffs and slopes in the alpine zone; rare in NW BC; circumpolar, N to AK, YT and NT, E to NF, and S to ME and NH; Eurasia.

DESCRIPTION:

General: Perennial, tufted herb from short rhizomes; stems 10-25 cm tall, with deep purple-brown, shiny bases.

Leaves: Mostly folded, sparsely fringed with fine hairs, about 5-15 cm long, 1.5-3 mm wide, gradually tapering to sharp tips; basal sheaths reddish-brown to deep purple-brown, shiny.

Flowers: Inflorescence a solitary, unstalked, dark to blackish-brown, dense cluster with about 8 to 15 flowers and 1 to 3, smaller, dense clusters on long, stiff, straight stalks, the outer clusters on erect stalks or nearly unstalked; perianth segments dark brown, 2-2.5 mm long, broadly lanceolate, pointed, the inner about the same length as the outer; stamens 6; anthers 0.4-0.6 mm long, about the same length as the filaments; bractlets strongly fringed with coarse hairs, nearly equal or sometimes surpassing the flowers, the lower bract poorly developed.

Fruits: Capsules, broadly egg-shaped, short abrupt-pointed, slightly shorter than the perianth segments; seeds spindle-shaped, pale brown, about 1 mm long, lacking appendages.

Luzula fastigiata* E. Mey. (*L. parviflora* [Ehrh.] Desv. ssp. *fastigiata* [E. Mey.] Hämet-Ahti)*forked wood-rush****HABITAT/RANGE:**

Mesic to moist alluvial forests in the lowland zone; frequent in coastal BC; N to AK and S to CA.

DESCRIPTION:

General: Perennial, loosely tufted herb from elongated rhizomes; stems 20-80 cm tall, reddish at the lowermost internodes.

Leaves: Flat, sparsely fringed with fine hairs, about 5-15 cm long, 6-7 mm wide, shorter than the stems, with sharp tips, the stem leaves 3 to 5, lanceolate, long-pointed, green, shiny, thin; basal sheaths slightly reddish.

Flowers: Inflorescence loose, open, slightly nodding, with flowers borne singly or in 2-flowered clusters, the stalks spreading; perianth segments green or pale brown, scarcely translucent with distinct midribs, 1.8-2.3 mm long, lanceolate, very pointed, the inner about the same length as the outer; stamens 6; anthers 0.3-0.4 mm long, much shorter than the filaments; bractlets entire to slightly irregularly jagged, but never strongly fringed with hairs; bracts entire to slightly fringed with fine hairs.

Fruits: Capsules, ellipsoid, pointed, with indistinct beaks, pale brown to straw-coloured, about equal to or longer than the perianth segments, less than 2.5 mm long; seeds spindle-shaped, 1.2-1.3 mm long, with minute appendages.

Luzula groenlandica* Böcher*Greenland wood-rush****HABITAT/RANGE:**

Wet depressions, streamsides and snowbed sites in the alpine zone; rare in NW BC; N to AK and NT, E to NF and Greenland.

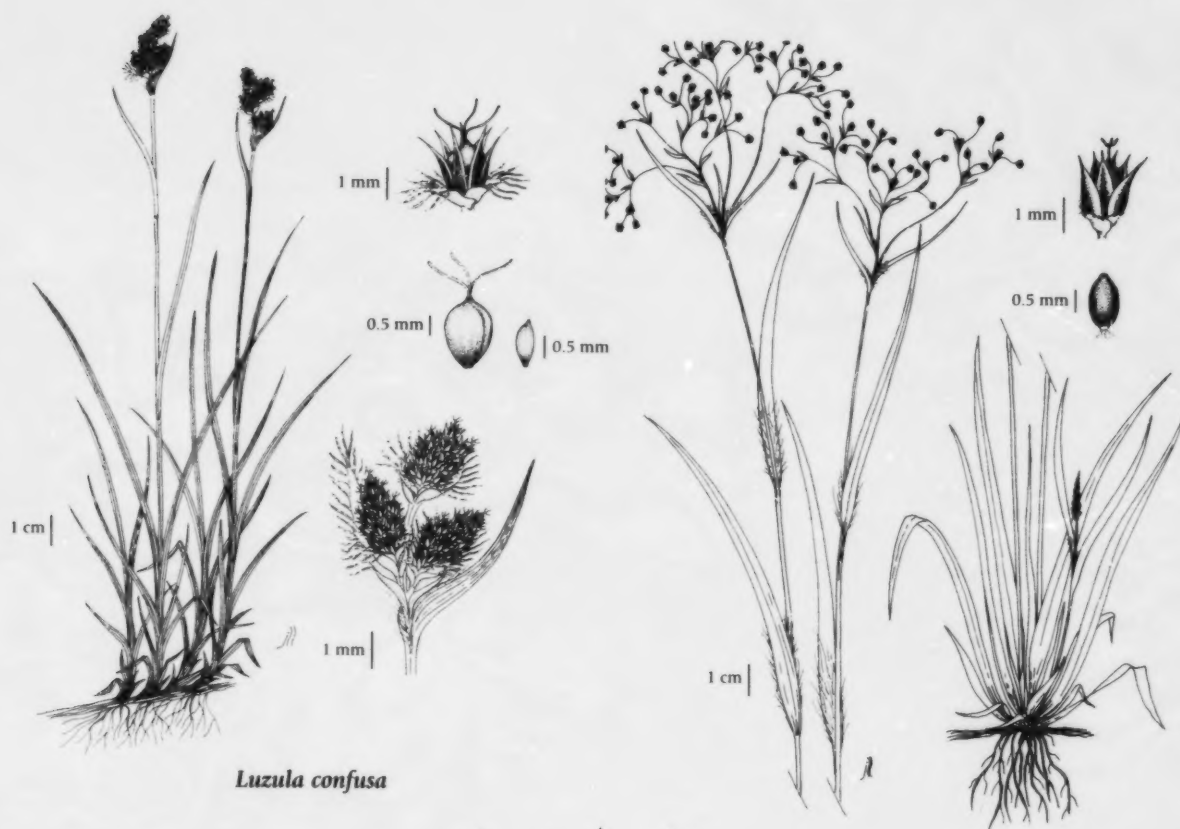
DESCRIPTION:

General: Perennial, densely tufted herb from short rhizomes, without stolons; stems 10-25 cm tall.

Leaves: Flat, fringed with fine hairs, 3-5 cm long and 2-3 mm wide, with purplish tinge.

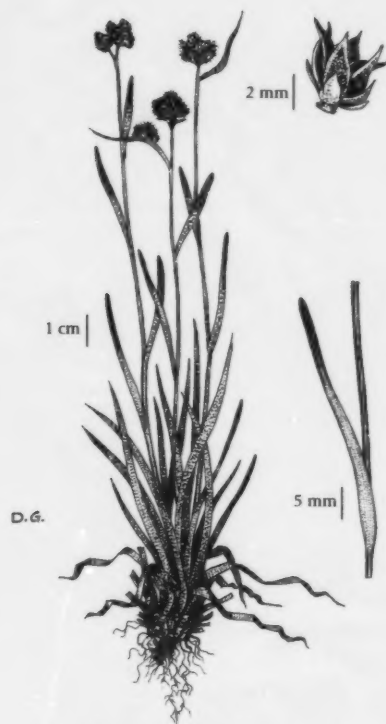
Flowers: Inflorescence a congested head with 2 to 5 dense clusters, each having 6 to 14 flowers; perianth segments dark brown, the margins membranaceous, 1.8-2.5 mm long, egg-shaped, pointed or short-awned, the inner shorter than the outer; styles much shorter than the ovaries; stamens 6; anthers 0.4-0.6 mm long, about the same length as the filaments; bractlets scarcely fringed with a few hairs, less than 1/2 the length of the perianth segments; lower bract leaflike, well-developed, surpassing the inflorescence.

Fruits: Capsules, egg-shaped, pointed, shorter than the perianth segments; seeds spindle-shaped, 1-1.2 mm long, with minute appendages.



Luzula confusa

Luzula fastigiata



Luzula groenlandica

Luzula hitchcockii* Hämet-Ahti (*L. glabrata* auct. non [Hoppe] Desv.)*Hitchcock's wood-rush****HABITAT/RANGE:**

Dry to mesic meadows, shrubby slopes and open ridges in the subalpine and alpine zones; frequent in and E of the Coast-Cascade Mountains S of 52° N; E to AB and S to WY, ID and OR.

DESCRIPTION:

General: Perennial herb with conspicuous rhizomes; stems 20-35 cm tall.

Leaves: Flat, sparsely fringed with fine hairs only around the sheaths, about 5-15 cm long, 6-9 mm wide, with sharp tips, shorter than the stems.

Flowers: Inflorescence open, loose, with flowers borne singly or in 2-flowered clusters, the stalks spreading, usually erect; perianth segments dark brown to chestnut-brown, 2.5-3 mm long, lanceolate, pointed, the inner about the same length as the outer; stamens 6; anthers 1.2-1.5 mm long, longer than the filaments.

Fruits: Capsules, egg-shaped, pointed, longer than the perianth segments, 2.8-3.8 mm long, the beaks up to 1 mm long; seeds lopsided-ellipsoid, 1.3-1.6 mm long, lacking appendages.

Luzula kjellmaniana* Miyabe & Kudo (*L. beeringiana* Gjaervoll, *L. tundricola* Gorodkov ex Vassil., *L. multiflora* ssp. *kjellmaniana* [Miyabe & Kudo] Tolm., *L. arctica* ssp. *latifolia* [Buch.] Porsild)*Kjellman's wood-rush****HABITAT/RANGE:**

Dry meadows and rocky slopes in the alpine zone; rare in N BC; N to YT, NT, and AK; N Asia.

DESCRIPTION:

General: Perennial herb from long, creeping rhizomes; stems 10-25 cm tall.

Leaves: Flat or folded, sparsely fringed with fine hairs, about 2-5 cm long, 1.5-3 mm wide, the tips narrow, blunt or pointed; basal sheaths straw-brown, dull.

Flowers: Inflorescence of 1 or 2, unstalked, dense clusters, each with about 5 to 12 flowers, plus 1 to 3 smaller clusters on short straight or arched stalks, the flower clusters pale brown to straw-brown; perianth segments brown with wide translucent or straw-coloured margins towards the tips, 2-2.5 mm long, lanceolate, pointed, the inner about the same length as the outer or slightly shorter; stamens 6; anthers 0.4-0.6 mm long, shorter than the filaments; bractlets strongly fringed, usually longer than 1/2 the length of the perianth segments; lower bract poorly developed.

Fruits: Capsules, egg-shaped, pointed, slightly shorter than the perianth segments; seeds spindle-shaped, 0.9-1.1 mm long, with minute, tail-like appendages.

Notes: The taxonomy of this taxon has been misunderstood and its distribution in BC requires further study. *Luzula kjellmaniana* has been erroneously treated as a part of the *L. multiflora* complex (i.e., Kartesz 1999), but in this treatment we followed Hämet-Ahti and Virrankoski (1971).



Luzula hitchcockii



Luzula kjellmaniana

***Luzula multiflora* (Ehrh.) Lej. (*L. campestris* auct. non [L.] DC., *L. multiflora* var. *minor* [Satake] Taylor & MacBryde)**
many-flowered wood-rush**HABITAT/RANGE:**

Dry open forests, rocky slopes and meadows in all vegetation zones; frequent throughout BC; circumpolar or disjunct cosmopolitan, N to AK, YT and NT, E to NF and S to VA, KY, IA, ND, MT, ID, and CA; Eurasia, S America, Philippines, New Zealand, Australia.

DESCRIPTION:

General: Perennial, densely tufted herb from short rhizomes, without stolons; 5-50 cm tall.

Leaves: Flat, fringed with fine hairs, 3-15 cm long and 3-6 mm wide; sheaths green.

Flowers: Inflorescence with about 5 to 15, stalked clusters, the clusters dense up to the base without remote basal flowers, each with 6 to 14 flowers; perianth segments pale green to dark brown, 2.5-4 mm long, lanceolate to egg-shaped, pointed or short-awned, the inner about the same length as the outer; styles slightly shorter to longer than the ovaries; stamens 6; anthers 0.6-1.2 mm long, longer than the filaments; bractlets scarcely fringed with a few hairs, less than 1/2 the length of the perianth segments; lower bract leaflike, well-developed, surpassing inflorescence or shorter.

Fruits: Capsules, egg-shaped, the tops blunt or pointed, shorter than or longer than the perianth segments; seeds spindle-shaped, 0.8-1.2 mm long, with short appendages.

Notes: This is a variable species with two subspecies in BC:

1. Outer perianth segments pointed, inner perianth segments blunt or with short, abruptly-pointed awns; capsules pointed, longer than the perianth segments; styles 0.3-0.5 mm long; alpine zone, northern BC ssp. *frigida* (Buch.) Krecz.
1. All perianth segments equal in shape, slenderly pointed; capsules with blunt tops, shorter than the perianth; styles 0.5-0.8 mm long; lowland or montane zones ssp. *multiflora*

Luzula nivalis* (Laest.) Spreng. (*L. arctica* Blytt)*arctic wood-rush****HABITAT/RANGE:**

Moist meadows, shrubby slopes and snowbed sites in the subalpine and alpine zones; rare on Vancouver Island and in N BC; circumpolar, N to AK, YT, and NT and E to NF; Eurasia.

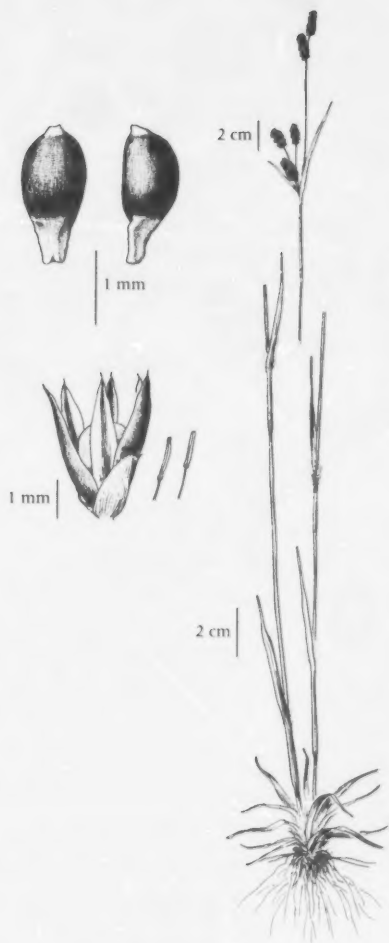
DESCRIPTION:

General: Perennial, densely tufted herb from short rhizomes; stems 5-20 cm tall, with brown base.

Leaves: Flat, sparsely fringed with fine hairs, 5-10 cm long, 2-4 mm wide, with swollen, callous-like tips, basal sheaths brownish to pale chestnut-brown.

Flowers: Inflorescence solitary, unstalked, of 1 to 3 clusters, each with 8 to 15 flowers, the basal clusters sometimes on short stalks; perianth segments dark brown, 1.5-2 mm long, lanceolate, pointed, the inner about the same length as the outer; stamens 6; anthers 0.3-0.6 mm long, about the same length as filaments; bractlets strongly fringed, usually longer than 1/2 the length of the perianth segments.

Fruits: Capsules, egg-shaped, longer than the perianth segments; seeds ellipsoid, 0.9-1.1 mm long, with minute appendages.



Luzula multiflora ssp. *multiflora*



Luzula nivalis

***Luzula parviflora* (Ehrh.) Desv. (*L. parviflora* ssp. *melanocarpa* [Michx.] Tolm.)**
small-flowered wood-rush

HABITAT/RANGE:

Dry to moist meadows, shrubby slopes and streambanks in the montane and subalpine zones; frequent in mountains throughout BC; circumpolar, N to AK, YT and NT, E to NF and S to NY, MI, WY and CA; Eurasia, Greenland.

DESCRIPTION:

General: Perennial, loosely tufted herb from elongated rhizomes; stems 20-50 cm tall, green or slightly reddish at the base.

Leaves: Flat, sparsely fringed with fine hairs at the base of the blades, shorter than the stems, about 5-15 cm long, 3-10 mm wide, the stem leaves (3) 4 or more, broadly linear to lanceolate, pointed, bluish or greyish-green, dull, thick to thin; basal sheaths green or slightly reddish.

Flowers: Inflorescence loose, open, nodding, with flowers borne singly or in 2-flowered clusters, the stalks arched; perianth segments brown with distinct midribs, translucent, 1.8-2.3 mm long, lanceolate, pointed, the inner about the same length as the outer; stamens 6; anthers 0.4-0.6 mm long, about as long as or shorter than the filaments; bractlets entire to deeply cut, but never strongly fringed; bracts entire to slightly fringed.

Fruits: Capsules, ellipsoid, usually blackish-brown, pointed, slightly longer than the perianth segments; seeds cylindrical, about 1.2 mm long, lacking appendages.

***Luzula piperi* (Cov.) M.E. Jones (*L. wahlenbergii* auct. non Rupr., *L. wahlenbergii* Rupr. ssp. *piperi* [Cov.] Hult.)**
Piper's wood-rush

HABITAT/RANGE:

Moist meadows, shrubby slopes, streambanks and thickets in the subalpine and alpine zones; frequent throughout BC in and E of the Coast-Cascade Mountains; amphiberian, N to AK and YT, E to AB and S to CO and N CA; E Asia.

DESCRIPTION:

General: Perennial, loosely tufted herb from short rhizomes; stems bluish-green, 20-40 cm tall.

Leaves: Mostly basal, flat, sparsely fringed with fine hairs only around the sheaths, about 5-15 cm long, 3-5 mm wide, with sharp tips, shorter than the stems, the stem leaves 3, up to 5 mm wide.

Flowers: Inflorescence loose, open, nodding, with flowers borne singly or in 2-flowered clusters, the stalks arched; perianth segments dark brown with distinct midribs, 1.8-2.3 mm long, lanceolate, pointed, the inner about the same length as the outer; stamens 6; anthers 0.4-0.6 mm long, about as long as or shorter than the filaments; bracts and bractlets strongly fringed with long, curly hairs.

Fruits: Capsules, ellipsoid, pointed, longer than the perianth segments, brown; seeds cylindrical, 1-1.2 mm long, lacking appendages.

***Luzula rufescens* Fischer ex E. Mey.**
rusty wood-rush

HABITAT/RANGE:

Dry to mesic open forests and forest margins, gravel bars, riverbanks and wetland edges in the montane zone; rare in NE BC; amphiberian, N to AK and YT; E Asia.

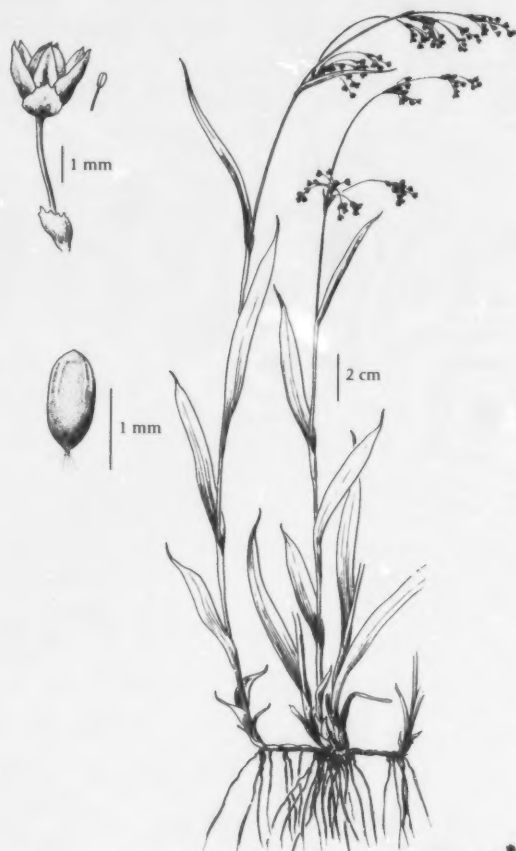
DESCRIPTION:

General: Perennial, loosely tufted herb from elongated rhizomes; stems 10-35 cm tall.

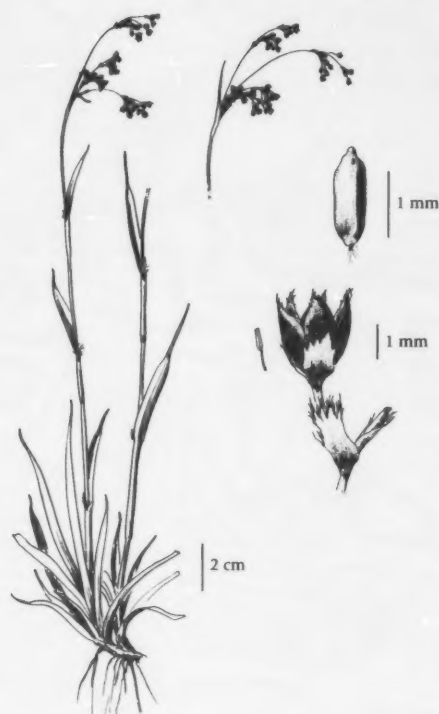
Leaves: Mostly basal, flat, sparsely fringed with fine hairs on the margins, about 2-5 cm long, 1-3.5 mm wide, with sharp tips.

Flowers: Inflorescence a loose, open umbel with flowers borne singly on long, spreading branches; perianth segments brown with translucent margins, 2-3 mm long, lanceolate, pointed, the inner about the same length as the outer; stamens 6; anthers 0.4-0.6 mm long, shorter than the filaments; bractlets entire.

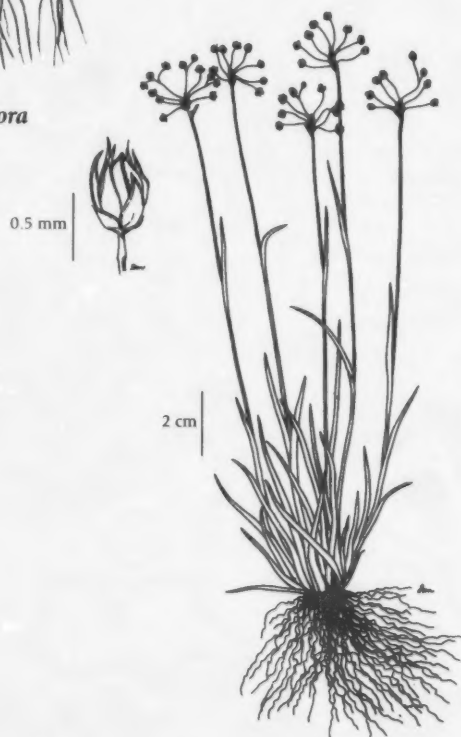
Fruits: Capsules, egg-shaped, rounded and pointed at the tops, slightly longer than the perianth segments; seeds spindle-shaped, 1.1-1.6 mm long, with a short, thin, yellowish tail.



Luzula parviflora



Luzula piperi



Luzula rufescens

Luzula spicata (L.) DC.

spiked wood-rush

HABITAT/RANGE:

Dry rocky slopes in the subalpine and alpine zones; frequent throughout BC; circumpolar, N to AK, YT and NT, disjunct E to MB, PQ and NF and S to ME, NH, VT, NY, NM, AZ and CA; Eurasia, Greenland.

DESCRIPTION:

General: Perennial, densely tufted herb from fibrous roots; stems 10-35 cm tall.

Leaves: Narrow, channeled, sparsely fringed with fine hairs, about 5-15 cm long, 1-2.5 mm wide, with sharp tips; sheaths brown to purplish.

Flowers: Inflorescence solitary, dense, spike-like, drooping, with 5 to 10 clusters, each cluster with 3 to 6 flowers; perianth segments brown with paler tips, 2-3 mm long, lanceolate, tapering into long awns, the inner about the same length as the outer; stamens 6; anthers 0.4-0.6 mm long, about the same length as the filaments; bracts bristlelike, reduced.

Fruits: Capsules, ellipsoid, pointed, shorter than the perianth segments; seeds egg-shaped, 0.9-1.1 mm long, with minute appendages.

Luzula subsessilis (S. Wats.) Buch. (*L. comosa* var. *macrantha* S. Wats.)

short-stalked wood-rush

HABITAT/RANGE:

Open dry forests in the lowland zone; frequent in coastal BC; S to CA.

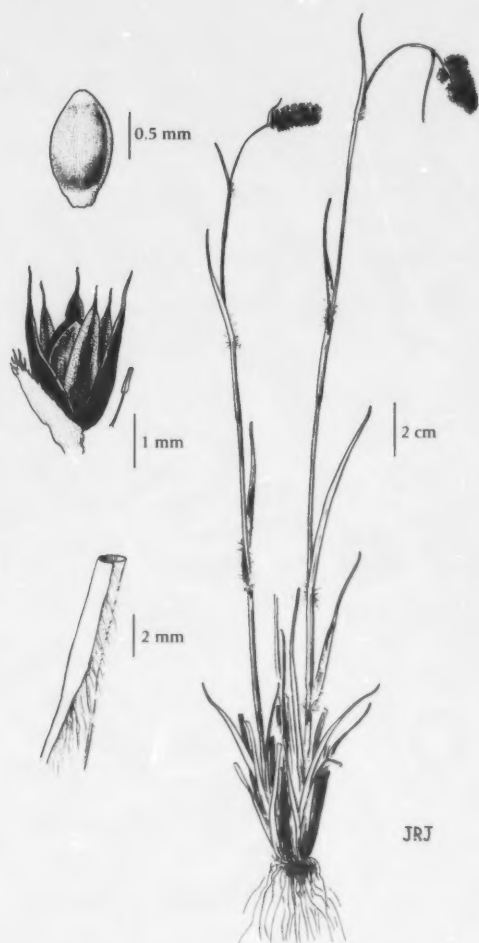
DESCRIPTION:

General: Perennial, tufted herb from short rhizomes, without stolons; stems 10-35 cm tall.

Leaves: Flat, fringed with fine hairs, 3-12 cm long, 3-5 mm wide; sheaths green.

Flowers: Inflorescence with 1 or 2 unstalked and about 15 stalked clusters, each with 4 to 10 flowers, the branches arching, with the basal flowers remote; perianth segments pale to dark brown or blackish with wide, papery margins, 3-4 mm long, lanceolate to egg-shaped, pointed or short-awned, the inner about the same length as the outer; styles 0.6-1.2 mm long; stamens 6, anthers 0.6-1.2 mm long, longer than the filaments; bractlets scarcely fringed with a few hairs, less than 1/2 the length of the perianth segments; lower bract leaflike and well developed but shorter than the inflorescence, rarely as long as or longer than the inflorescence.

Fruits: Capsules, egg-shaped, blunt or slightly notched on the tops, shorter than to longer than the perianth segments; seeds egg-shaped to rounded, 1.1-1.3 mm long, with minute appendages.



JRJ

Luzula spicata



Luzula subsessilis

JUNCAGINACEAE

1. Perianth parts 6; flowers without bracts, of one type, all male/female (bisexual) and terminal..... *Triglochin*
1. Perianth parts 1 or lacking; flowers with bracts, the flowers of 3 types: either male/female on spikes, male mainly on top of spikes or female mainly at base of spikes and solitary in submersed leaf axils *Lilaea*

LILAEA

Lilaea scilloides (Poir.) Haum. (*L. subulata* Bonpl.)

flowering quillwort

HABITAT/RANGE:

Mud flats, ponds and marshes in the lowland zone; rare in coastal BC; E to S SK and S to MT, NV, CA and MX; S America.

DESCRIPTION:

General: Aquatic annual herb from fibrous roots; stems 3-20 cm tall.

Leaves: All basal, tufted, linear, 5-35 cm long, 1-4 mm thick, the tips abruptly to gradually pointed; sheaths 3-10 cm long, translucent.

Flowers: Inflorescence of 3 types: either male/female flowers on spikes, male flowers mainly on top of spikes; or female mainly at base of spikes and solitary in submersed leaf axils; female/male flowers with 1 perianth part, 2-3 mm long, 1 stamen and 1 ovary; male flowers with 1 perianth part, 2-3 mm long, 1 stamen; female flowers lacking a perianth part and with 1 ovary; styles short or lacking in spike flowers or 5-25 cm long and threadlike in axillary flowers.

Fruits: Nutlets, 2-5 mm long, with 25 to 30 ribs and several wings, the axillary, basal ones beaked at the tips.

TRIGLOCHIN

1. Fertile ovaries 3; fruits linear to slenderly club-shaped *T. palustris*
1. Fertile ovaries 6; fruits oblong to egg-shaped.
 2. Ligules entire or nearly so, (1) 1.5-5 mm long; leaf blades somewhat compressed; plants (10) 30-100 (120) cm tall *T. maritima*
 2. Ligules 2-lobed, 0.5-1 mm long; leaf blades more or less cylindric; plants 5-15 (30) cm tall *T. concinna*

Triglochin concinna Burt-Davy

graceful arrow-grass

HABITAT/RANGE:

Tidal marshes; rare in coastal BC; S to NW MX; S America.

DESCRIPTION:

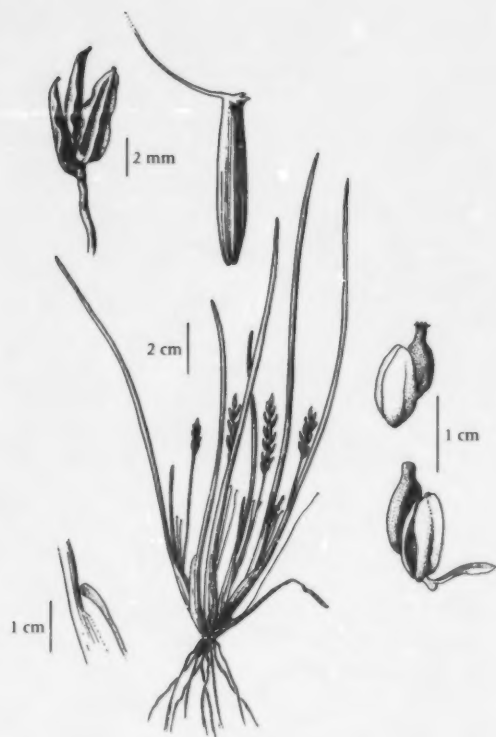
General: Aquatic perennial herb from a rhizome; stems 5-20 cm tall.

Leaves: All basal, tufted, linear, 5-20 cm long, 0.5-1.5 mm wide, more or less cylindric; ligules 2-lobed, 0.5-1 mm long.

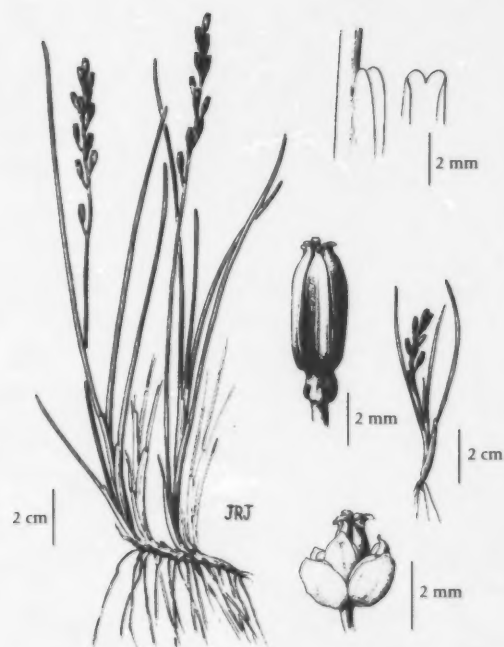
Flowers: Inflorescence elongated and leafless, usually shorter than the leaves with 5 to 20, short-stalked flowers; perianth parts usually 6, about 1.5 mm long; stamens usually 6; fertile ovaries 6.

Fruits: Dry, oblong to egg-shaped, 4-5 mm long, splitting into 6 carpels at maturity; seeds 1 per carpel, more or less angled.

Notes: *T. concinna* is treated separately from *T. maritima* in this manual since they are distinct in our region. Some taxonomists, e.g., Flora of North America Editorial Committee (2000), have merged them since they are difficult to separate over much of their range.



Lilaea scilloides



Triglochin concinna

Triglochin maritima* L. (*T. concinna* var. *debilis* [M. E. Jones] J. T. Howell)*seaside arrow-grass****HABITAT/RANGE:**

Tidal marshes, saline and alkaline ponds, fens and wet meadows in the lowland, steppe and montane zones; frequent throughout BC south of 55° N, less frequent northward; cosmopolitan, N to AK, YT and NT, E to NF and S to NH, PA, OH, IL, OK, NM, AZ, CA and MX; Eurasia, N Africa, S America.

DESCRIPTION:

General: Aquatic or semi-aquatic perennial herb from a rhizome; stems (10) 30-100 (120) cm tall.

Leaves: All basal, tufted, linear, 20-70 cm long, 1.5-2.5 (4) mm wide, flat; ligules entire or nearly so, 1-5 mm long.

Flowers: Inflorescence elongated and leafless, usually longer than the leaves with many, short-stalked flowers; perianth parts usually 6, about 2 mm long; stamens usually 6; fertile ovaries 6.

Fruits: Dry, oblong to egg-shaped, 3-5 (7) mm long, splitting into 6 carpels at maturity; seeds 1 per carpel, more or less angled.

Triglochin palustris* L.*marsh arrow-grass****HABITAT/RANGE:**

Tidal marshes, saline and alkaline ponds, wet meadows and fens in the lowland, steppe and montane zones; common in BC east of the Coast-Cascade Mountains and S of 55° N, less frequent northward and along the coast; cosmopolitan, N to AK, YT and NT, E to NF and S to ME, NY, OH, IA, NE, NM, UT, NV and CA; Greenland, Eurasia, S America.

DESCRIPTION:

General: Aquatic perennial herb from a rhizome; stems 15-60 cm tall.

Leaves: All basal, tufted, linear, 10-30 (40) cm long, 0.5-2 mm wide, flat; ligules usually 2-lobed, 0.5-1.5 mm long.

Flowers: Inflorescence elongated and leafless, usually longer than the leaves with many, short-stalked flowers; perianth parts usually 6, 1.5-2 mm long; stamens usually 6; fertile ovaries 3.

Fruits: Dry, linear to slenderly club-shaped, 6-7 (9) mm long, splitting into 3 carpels at maturity; seeds 1 per carpel, more or less angled.

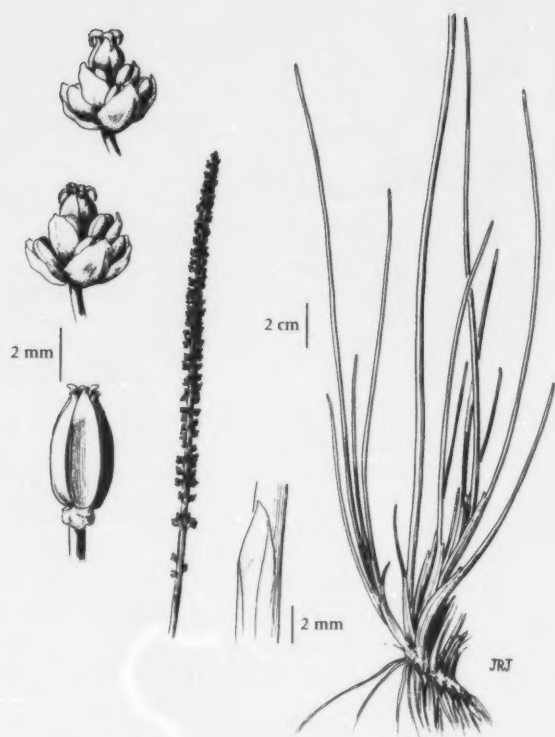
LEMNACEAE⁸

1. Fronds unnerved, 0.5-1.5 mm long, rootless *Wolffia*
1. Fronds nerved, 2 mm or more long, with roots.
 2. Fronds usually obscurely 3-nerved, with solitary roots *Lemna*
 2. Fronds 4- to 12-nerved, with 5 to 15 roots *Spirodela*

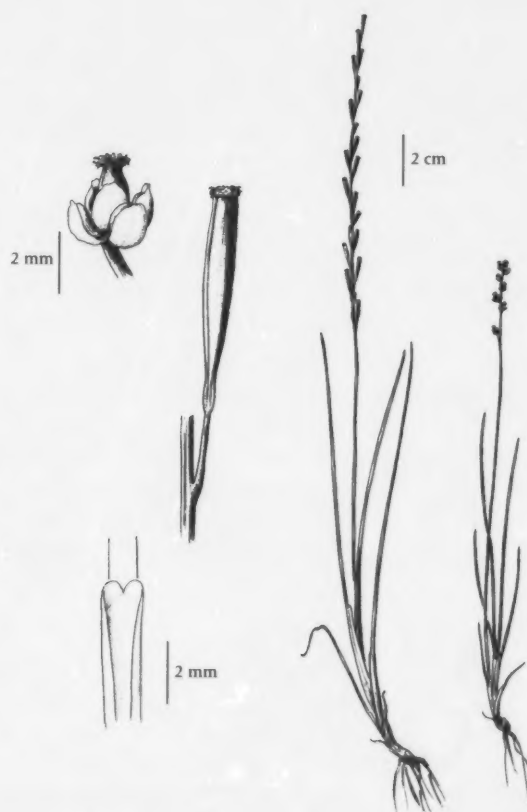
LEMNA

1. Fronds oblong to lanceolate, 6-12 mm long, long-stalked, remaining attached in a zig-zag chain, usually submersed *L. trisulca*
1. Fronds elliptic, rounded or broadly egg-shaped, 2-6 mm long, unstalked, quickly becoming detached, floating on the surface *L. minor*

⁸ The duckweeds are flowering plants but usually reproduce vegetatively; most of our plants are sterile.



Triglochin maritima



Triglochin palustris

***Lemna minor* L. (*L. turionifera* Landolt)**

common duckweed; water lentil

HABITAT/RANGE:

Ponds and slow-moving streams in the lowland, steppe and montane zones; common throughout BC south of 55° N, less frequent northward, absent in NW BC and rare in the Queen Charlotte Islands; circumpolar, N to AK, YT and NT, E to NF and S to FL, MS, TX, NM, AZ, CA and MX; Eurasia.

DESCRIPTION:

General: Fronds annual, free-floating, usually in pairs, elliptic, rounded or broadly egg-shaped, 2-6 mm long, unstalked, quickly becoming detached, obscurely 3-nerved, the young plants produced from a pair of marginal pouches near the base of the frond.

Notes: The separation of *L. turionifera* from *L. minor*, based on characters which are usually absent in BC or are sometimes found in *L. minor*, is not practical in this flora. *Lemna turionifera* has dark green or brown winter buds and fronds which are 3- to 5-nerved and purple-red beneath.

***Lemna trisulca* L.**

ivy-leaved duckweed; star duckweed

HABITAT/RANGE:

Ponds and slow-moving streams in the lowland, steppe and montane zones; frequent throughout BC south of 56° N, absent on the Queen Charlotte Islands and the mainland coast, infrequent elsewhere in BC east of the Coast-Cascade mountains and S of 55° N; circumpolar, N to AK, YT and NT, E to NB and NS and S to VA, AL, AR, TX, NM, AZ, CA and MX; Eurasia, S America.

DESCRIPTION:

General: Fronds annual, usually submersed, oblong to lanceolate, 6-12 mm long, long-stalked, remaining attached in a zig-zag chain, obscurely 3-nerved, the young plants produced from pouches on either side near the junction of the stalk and the plant body.

SPIRODELA

***Spirodela polyrhiza* (L.) Schleid.**

great duckweed

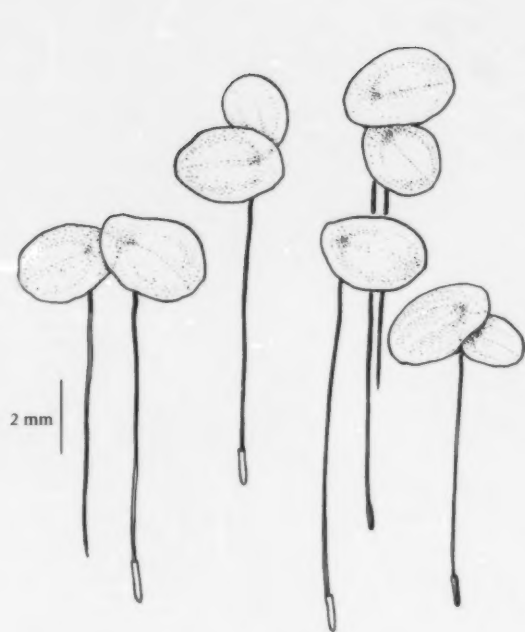
HABITAT/RANGE:

Ponds and slow-moving streams in the lowland, steppe and montane zones; frequent in SW and SC BC, infrequent elsewhere except absent on N Vancouver Island, the Queen Charlotte Islands and NW BC; circumpolar, E to PQ and NS and S to FL, MS, TX, NM, AZ, CA and MX; Eurasia, S America.

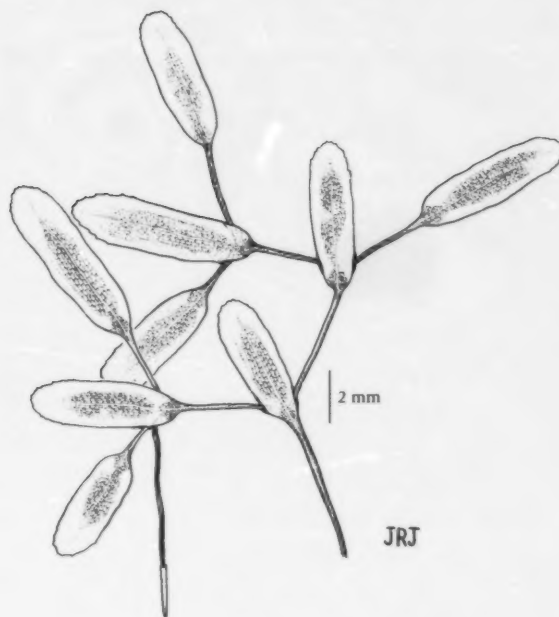
DESCRIPTION:

General: Fronds annual, free-floating, round to egg-shaped, (3) 5-10 mm long, purplish beneath, stalked, in single or small groups, 5- to 11-nerved, with 5 to 15 rootlets.

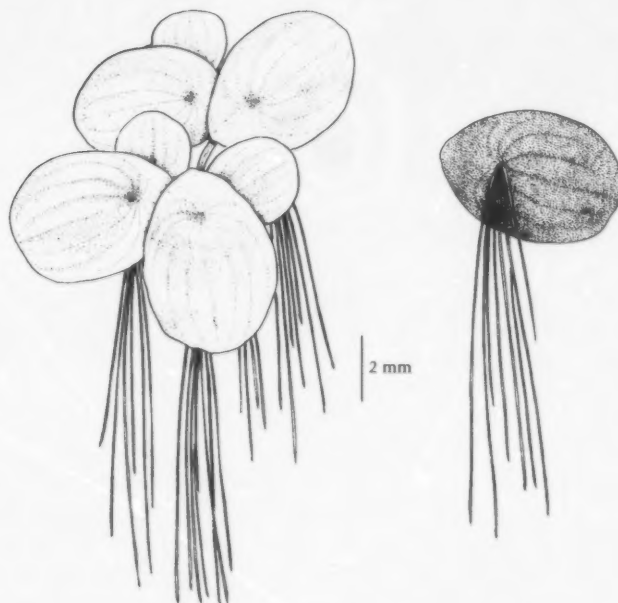
Flowers: Usually 3 per pouch, 2 male, 1 female, enclosed in 2 lateral budding pouches sheathed by a minute membrane.



Lemna minor



Lemna trisulca



Spirodela polyrhiza

WOLFFIA

1. Fronds elliptical to egg-shaped, nearly twice as long as wide *W. borealis*
1. Fronds globe-shaped, about as long as wide *W. columbiana*

***Wolffia borealis* (Engelm. ex Hegelm.) Landolt ex Landolt & Wildi (*W. punctata* auct. non Griseb.)**
northern water-meal

HABITAT/RANGE:

Ponds, lakes and slow-moving streams in the lowland and montane zones; rare in the lower Fraser Valley and SE BC (Creston); disjunct in ON and PQ and S to CT, NC, TN, MO, KS, CO, UT and CA.

DESCRIPTION:

General: Fronds annual, free-floating, elliptic to egg-shaped, nearly twice as long as wide, 0.5-1.2 mm long, dark green, upper surface flat with 15 to 100 stomates, usually in unequal pairs, rootless, with a pouch at the basal end from which young plants arise.

Flowers: Two, together on the upper surface, 1 female, 1 male; stamen 1; pistil 1.

Fruits: Utricles (inflated fruits), globe-shaped; seeds 1, smooth.

***Wolffia columbiana* Karst.**

Columbian water-meal

HABITAT/RANGE:

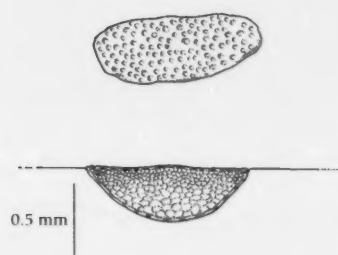
Ponds and lakes in the lowland zone; rare in SW BC, known only from the Saanich Peninsula; E to PQ and S to MA, PA, FL, MS, TX, CO and CA; S. America.

DESCRIPTION:

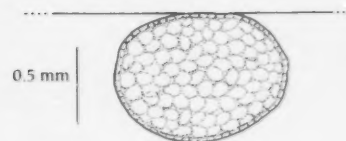
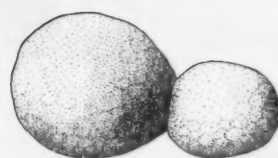
General: Fronds annual, free-floating, globe-shaped, about as long as wide, 0.8-1.3 mm long, transparent green, round except for flat center with 1 to 10 (30) stomates, usually in unequal pairs, rootless, with a pouch at the basal end from which young plants arise.

Flowers: Two, together on the upper surface, 1 female, 1 male; stamen 1; pistil 1.

Fruits: Utricles (inflated fruits), globe-shaped; seeds 1, smooth.



Wolffia borealis



Wolffia columbiana

LILIACEAE^{9, 10}

1. Leaves scale-like, subtending soft, thread-like, green branches (phyllodes) *Asparagus*
1. Leaves not scale-like, broader; phyllodes lacking.
 2. Ovaries distinctly inferior *Narcissus*
 2. Ovaries superior (rarely partially inferior).
 3. Leaves in a single whorl of 3 *Trillium*
 3. Leaves not in a single whorl of 3.
 4. Petals and sepals very different, the petals much wider than the sepals *Calochortus*
 4. Petals and sepals similar, petal-like.
 5. Flowers borne in umbels.
 6. Plants with the odour of onions; tepals (petal-like segments) distinct to base *Allium*
 6. Plants lacking odour of onions; tepals joined up to half their length.
 7. Anthers 6, attached at middle *Triteleia*
 7. Anthers 3, attached at base *Brodiaea*
 5. Flowers solitary, or in racemes or panicles, but not in umbels.
 8. Leaves tough, persisting for more than one year, as large basal tuft *Xerophyllum*
 8. Leaves soft, not persisting for more than one year.
 9. Leaves mostly on the flowering stems, not strongly reduced upward.
 10. Plants from scaly bulbs; leaves often whorled.
 11. Tepals 4-10 cm long, yellow-orange to orange-red *Lilium*
 11. Tepals 1-3.5 cm long, dark green to brown, black or yellow *Fritillaria*
 10. Plants from rhizomes; leaves alternate, never whorled.
 12. Flowers more than 10 in terminal racemes or panicles.
 13. Styles 3; tepals 6-13 mm long *Veratrum*
 13. Styles 1; tepals 2-7 mm long *Maianthemum* (includes former *Smilacina*)
 12. Flowers borne singly along stems or in clusters of 1 to 3 at tips.
 14. Flowers 1 or 2 along lower side of stems *Streptopus*
 14. Flowers 1 to 3 at tips of main stems *Prosartes* (formerly *Disporum*)
 9. Leaves primarily basal; flowering stems naked, or with leaves greatly reduced upward.
 15. Leaves with broad white mid-veins; tepals with green stripe on outside *Ornithogalum*
 15. Leaves plain green, without white mid-veins; tepals lacking green stripe on outside.
 16. Styles 3, distinct almost to the ovary.
 17. Leaves 2-ranked and folded-over; plants from rhizomes.

⁹ Modified after Hitchcock and Cronquist (1973).¹⁰ Contributed by J. Pojar.

- 18. Stems glandular-hairy, at least in the inflorescences *Triantha* (formerly *Tofieldia*)
- 18. Stems smooth throughout *Tofieldia*
- 17. Leaves neither 2-ranked nor folded-over; plants from bulbs.
 - 19. Tepals with a prominent gland near their bases; flowers saucer-shaped to shallowly bell-shaped *Zigadenus*
 - 19. Tepals lacking glands; flowers tubular-bell-shaped.
 - 20. Tepals greenish-yellow to brownish-purple; plants montane to alpine *Stenanthium*
 - 20. Tepals blue, pink or white; plants of the lowland zone *Hyacinthoides*
- 16. Styles 1, or 3 but joined more than half their length.
 - 21. Leaves several, linear to linear-lanceolate, at least 10 times as long as wide.
 - 22. Flowers borne singly or at most in 2's; plants not more than 15 cm tall, subalpine to alpine *Lloydia*
 - 22. Flowers in racemes; plants more than 20 cm tall, of the lowlands *Camassia*
 - 21. Leaves usually 2, lanceolate or oblong to elliptic, less than 10 times as long as wide.
 - 23. Plants from rhizomes; filaments hairy; fruits fleshy blue berries at maturity *Clintonia*
 - 23. Plants from bulbs and corms; filaments smooth; fruits dry capsules at maturity *Erythronium*

ALLIUM

- 1. Inner filaments with long appendages, longer than the anthers; plants introduced weeds of SW BC *A. vineale*
- 1. Inner filaments lacking appendages; plants native.
 - 2. Inflorescence more or less head-like, flowering from the centre outward, the flowers on very short stalks; leaves cylindric *A. schoenoprasum*
 - 2. Inflorescence umbel-like, open or compact, flowering from the outside inward; leaves more or less flattened.
 - 3. Bulb coats persisting as a coarse-meshed network of fibres *A. geyeri*
 - 3. Bulb coats not a network of fibres.
 - 4. Plants from distinctive horizontal rhizomes *A. validum*
 - 4. Plants from bulbs, lacking distinctive rhizomes.
 - 5. Bulbs elongated; umbels usually nodding; stamens exerted *A. cernuum*
 - 5. Bulbs egg-shaped; umbels usually erect; stamens included.
 - 6. Leaves usually 2, curved to one side, longer than the flowering stems *A. crenulatum*
 - 6. Leaves usually more than 2, not curved to one side, shorter than the flowering stems.
 - 7. Tepals (petal-like segments) lanceolate, long-tapering to pointed tips, the tips widely spreading to curved back *A. acuminatum*
 - 7. Tepals elliptic-lanceolate, short-tapering to pointed tips, the tips not curved back *A. amplexans*

Allium acuminatum Hook.

Hooker's onion

HABITAT/RANGE:

Dry rocky bluffs, Garry Oak woodlands and meadows in the lowland and steppe zones; infrequent on SE Vancouver Island, the Gulf Islands and the Fraser Valley, north to Lytton and Pemberton; S to NM, AZ and CA.

DESCRIPTION:

General: Perennial herb from an egg-shaped to nearly globe-shaped, scaly bulb, the outer scales brownish, with a prominent fibrous network, the inner scales white; flowering stems erect, 10-30 cm tall, slender, round in cross-section, smooth.

Leaves: Basal leaves 2 to 3 or more, linear, cylindric, shorter than to about as long as the flowering stem, 1-3 mm wide, smooth, the margins entire; stem leaves lacking.

Flowers: Inflorescence an open, terminal umbel of several to many, stalked flowers, above 2 membranous, broadly lanceolate bracts, the stalks 1-3 cm long; flowers rose-pink to whitish, bell-shaped, of 6 distinct tepals, the tepals mostly 10-12 mm long, lanceolate, gradually tapering to pointed tips, the inner 3 with fine-toothed margins, the outer 3 larger, entire, the tips widely spreading to curved back; stamens 6, about 2/3 as long as the tepals; pistil 1, 3-chambered.

Fruits: Capsules, more or less egg-shaped, 3-lobed, with 3 very small, rounded crests; seeds 6 or fewer, dull-black.

Allium amplexens Torr.

slimleaf onion

HABITAT/RANGE:

Vernally moist rocky bluffs and meadows in the lowland zone; infrequent on SE Vancouver Island, the Gulf Islands and the adjacent mainland (Powell River); S to CA.

DESCRIPTION:

General: Perennial herb from an egg-shaped to nearly globe-shaped, scaly bulb, the outer scales brownish to grey, with a wavy, fibrous network, the inner scales red or white; flowering stems erect, 10-40 cm tall, slender, round in cross-section, smooth.

Leaves: Basal leaves 2 to 4, withering early, linear, channeled to cylindric, shorter than the flowering stem, very slender, smooth, the margins entire; stem leaves lacking.

Flowers: Inflorescence a compact, often head-like, terminal umbel of several to many, stalked flowers, above 2 to 3 membranous, egg-shaped bracts, the stalks 0.5-1.5 cm long; flowers white to pink, saucer-shaped, of 6 distinct tepals, the tepals 5-9 mm long, lanceolate with pointed tips, spreading, in fruit becoming papery and folding over the ovaries; stamens 6, nearly as long as the tepals; pistil 1, 3-chambered.

Fruits: Capsules, more or less egg-shaped, 3-lobed, with 6 low, rounded crests; seeds 6 or fewer, black.

Allium cernuum Roth var. *cernuum*

nodding onion

HABITAT/RANGE:

Dry to mesic rocky bluffs, grassy slopes, meadows and open forests in the lowland and steppe to subalpine zones; common in BC south of 56° N; E to ON and S to NY, NC, GA, MS, TX, WY, UT, ID and OR.

DESCRIPTION:

General: Perennial herb from an elongate, long-necked, narrowly egg-shaped, scaly bulb, the outer scales membranous, without a fibrous network, the inner scales faintly pinkish, the bulbs often clustered; flowering stems erect but down-curved near the top, 10-50 cm tall, slender, often somewhat angled, smooth.

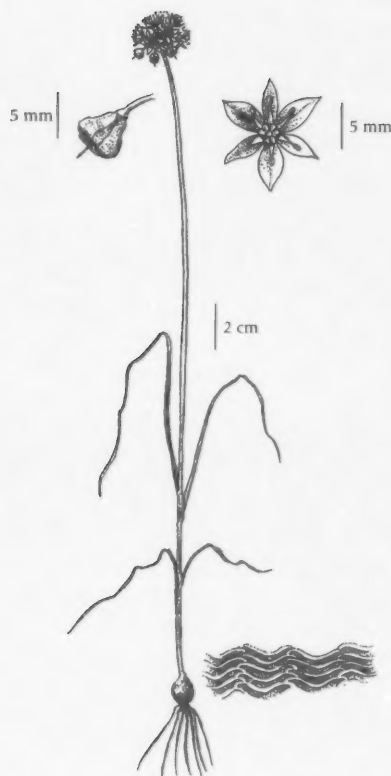
Leaves: Basal leaves several per bulb, linear, flat to channeled, shorter than the flowering stem, about 3 mm wide, smooth, the margins entire or minutely toothed; stem leaves lacking.

Flowers: Inflorescence a compact, terminal, nodding umbel of several to many, stalked flowers, above 2 membranous bracts, the stalks 1-3 cm long, the bracts soon deciduous; flowers pink to rose-purple or whitish, bell-shaped, of 6 distinct tepals, the tepals 4-6 mm long, elliptic-egg-shaped, blunt; stamens 6, exerted; pistil 1, 3-chambered.

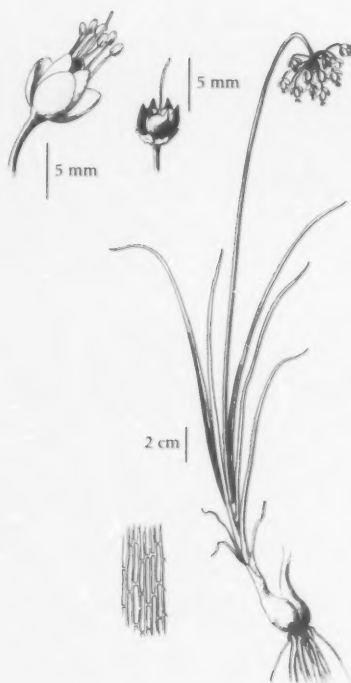
Fruits: Capsules, more or less egg-shaped, 3-lobed, with 6 crests, 2 on each lobe; seeds 6 or fewer, dull-black.



Allium acuminatum



Allium amplexans



Allium cernuum var. *cernuum*

Allium crenulatum Wiegand

Olympic onion

HABITAT/RANGE:

Dry rock outcrops and rockslides in the lowland, subalpine and alpine zones; rare on S Vancouver Island and the Gulf Islands; S to WA.

DESCRIPTION:

General: Perennial herb from a lopsided-egg-shaped, scaly bulb, the outer scales papery-white or greyish, without a fibrous network; flowering stems ascending to erect, 5-8 cm tall, flattened, 2-angled or -winged, the margins obscurely scalloped.

Leaves: Basal leaves usually 2, flattened, curved and hooked at the tips, distinctly longer than the flowering stem, 1-3 mm wide, smooth, the margins sometimes minutely toothed; stem leaves lacking.

Flowers: Inflorescence a compact, terminal umbel of several to many, stalked flowers, above 2 membranous, broadly lanceolate bracts, the stalks about as long as the flowers; flowers pink to rose-purple, bell-shaped, of 6 distinct tepals, the tepals 6-12 mm long, oblong-lanceolate tapering to pointed tips; stamens 6, about 2/3 as long as the tepals; pistil 1, 3-chambered.

Fruits: Capsules, more or less egg-shaped, 3-lobed, with 6 low, rounded crests; seeds 6 or fewer, black.

Allium geyeri S. Wats. var. *tenerum* M.E. Jones

Geyer's onion

HABITAT/RANGE:

Moist meadows, banks, and rock outcrops in the lowland, steppe and montane zones; rare on Vancouver Island and in the Fraser and Thompson River valleys; E to MB and S to NM, AZ, NV and OR.

DESCRIPTION:

General: Perennial herb from an egg-shaped, scaly bulb, the bulbs often clustered, the outer scales brownish, fibrous, in a coarse-meshed network, the inner scales whitish, flowering stems erect, 10-50 cm tall, slender, cylindric to somewhat angled, smooth.

Leaves: Basal leaves usually 3 or more, persisting, linear, channeled, shorter than the flowering stem, 2-5 mm wide, smooth, the margins entire; stem leaves lacking.

Flowers: Inflorescence a terminal umbel of several to many, stalked flowers, above 2 or 3 membranous, egg-shaped to lanceolate bracts, the stalks longer than the flowers; flowers pink, rarely white, bell-shaped, of 6 distinct tepals, mostly replaced by bulbils; tepals usually 6-8 mm long, egg-shaped to lanceolate, somewhat long-tapering to pointed or blunt tips, sometimes obscurely toothed on the margins, erect, in fruit becoming tough-keeled and enclosing the capsule; stamens 6, usually shorter than the tepals; pistil 1, 3-chambered.

Fruits: Capsules, more or less egg-shaped, 3-lobed, with 6 low, knob-like crests; seeds 6 or fewer, shiny-black.

Allium schoenoprasum L. var. *sibiricum* (L.) Hartm.

wild chives

HABITAT/RANGE:

Wet to moist meadows, streambanks and lake margins in the montane zone; infrequent in N and E BC; circumboreal, N to AK, YT and NT, E to NF and S to ME, MA, VA, OH, MO, CO, UT, NV and OR; Eurasia.

DESCRIPTION:

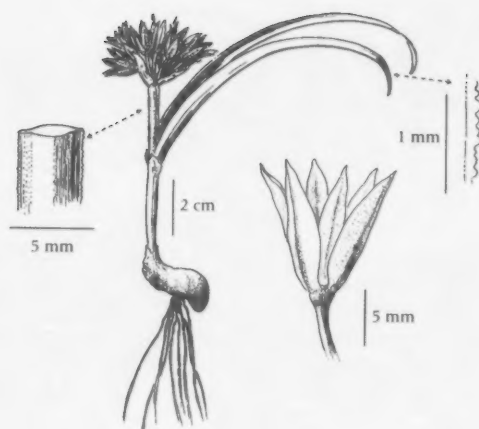
General: Perennial herb from an oblong-egg-shaped, scaly bulb, the bulbs clustered, the outer scales greyish or brownish, membranous, without a fibrous network, the inner scales whitish or pinkish; flowering stems erect, 20-60 cm tall, stout, cylindric, smooth.

Leaves: Usually 2, borne below the middle of the flowering stem, linear, cylindric, hollow, shorter than the stem, 1-2 mm wide, smooth, the margins entire.

Flowers: Inflorescence a compact, terminal, head-like cluster of usually many, stalked flowers, above 2 membranous, egg-shaped to lanceolate bracts, the stalks shorter than the flowers; flowers pale pink to purplish, vase-shaped, of 6 distinct tepals; tepals 8-12 mm long, lanceolate to elliptic, long-tapering to pointed tips, erect, in fruit becoming papery and enclosing the capsule; stamens 6, shorter than the tepals; pistil 1, 3-chambered.

Fruits: Capsules, more or less egg-shaped, 3-lobed, lacking distinct crests; seeds 6 or fewer, shiny-black.

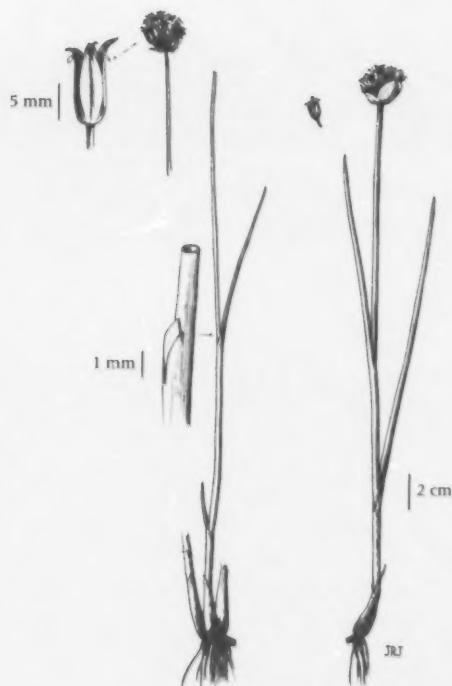
Notes: Cultivated plants can occur as garden escapes.



Allium crenulatum



Allium geyeri var. *tenerum*



Allium schoenoprasum var. *sibiricum*

Allium validum S. Wats.

swamp onion

HABITAT/RANGE:

Moist meadows in the steppe to alpine zones; rare in SC and SE BC; S to ID, NV and CA.

DESCRIPTION:

General: Perennial herb from an elongate, narrowly egg-shaped, scaly bulb, the bulbs clustered on a short, stout rhizome, the outer scales membranous, brownish to greyish, with coarse, parallel fibres, the inner scales reddish or whitish; flowering stems erect, 30-70 cm tall, flattened, narrowly winged toward the top, smooth.

Leaves: Basal leaves several per bulb, linear, blunt, flat or slightly keeled, shorter than the flowering stem, 4-15 mm wide, persistent, smooth, the margins entire; stem leaves lacking.

Flowers: Inflorescence a compact, terminal umbel of many, stalked flowers, above 2 membranous, egg-shaped bracts, the stalks 0.7-1.4 cm long; flowers pink, vase-shaped, of 6 distinct tepals, the tepals 8-10 mm long, narrow, long-tapering to pointed tips; stamens 6, much longer than the tepals; pistil 1, 3-chambered.

Fruits: Capsules, more or less egg-shaped, 3-lobed, lacking crests; seeds 6 or fewer, dull-black.

Allium vineale L. ssp. *vineale*

field garlic

HABITAT/RANGE:

Mesic to dry fields and waste places in the lowland zone; infrequent on S Vancouver Island; introduced from Europe.

DESCRIPTION:

General: Perennial garlic-scented herb from an egg-shaped, scaly bulb, the bulbs clustered with several hard-shelled bulblets within the outer scales, which are yellow-brown, vertically grooved, and fibrous; flowering stems erect, 30-100 cm tall, slender, cylindric, solid, smooth.

Leaves: Usually 2 to 4, borne below the middle of the flowering stem, linear, cylindric, hollow, much shorter than the stem, 1-2 mm wide, long-sheathing at the base, smooth, the margins entire.

Flowers: Inflorescence a compact, terminal, head-like cluster of several to many, stalked flowers or the flowers largely replaced by bulbils, above 1 membranous, lanceolate bract, the stalks 4- to 5-times as long as the flowers; flowers greenish-white to purplish, bell-shaped, of 6 distinct tepals; tepals 3-4 mm long, oblong-egg-shaped, blunt, erect; stamens 6, the inner 3 longer than the tepals and with filaments bearing a pair of lateral appendages; pistil 1, 3-chambered.

Fruits: Capsules, more or less egg-shaped, 3-lobed, lacking distinct crests; seeds 6 or fewer, black.

ASPARAGUS

Asparagus officinalis L.

garden asparagus

HABITAT/RANGE:

Mesic to dry fields, floodplain thickets, orchards, roadsides and ditches in the lowland and steppe zones; common in S BC east of the Coast-Cascade Mountains, rare along the SW coast; introduced from Europe.

DESCRIPTION:

General: Perennial herb from cord-like rhizome; stems numerous, clustered, erect, 1-1.5 m tall, green, fleshy and unbranched when young, becoming freely branched and "fern-like" with age, smooth; branchlets green, thread-like, mostly 8-15 mm long, in tufts in the axils of the leaves.

Leaves: Alternate, scalelike, papery, triangular, 1-2 mm long, or to 5 mm on young stems; basal leaves lacking.

Flowers: Inflorescence of solitary or paired flowers drooping on short, thread-like, jointed, axillary stalks, the stalks 1-2 cm long; male and female flowers on separate plants, greenish- or yellowish-white, bell-shaped, 3-7 mm long, the male flowers slightly larger than the female, of 6 similar, distinct, petal-like segments; stamens 6; pistil 1, 3-chambered.

Fruits: Berries, globe-shaped, red, 6-8 mm wide.



Allium validum



Allium vineale ssp. *vineale*



Asparagus officinalis

BRODIAEA

***Brodiaea coronaria* (Salisb.) Engl. ssp. *coronaria*
harvest brodiaea**

HABITAT/RANGE:

Mesic to dry grassy slopes and rocky bluffs in the lowland and steppe zones; infrequent on SE Vancouver Island, the Gulf Islands and adjacent mainland (isolated population at Spences Bridge); S to CA.

DESCRIPTION:

General: Perennial herb from a deep, dark brown, fibrous-scaly, nearly globe-shaped, bulb-like corm about 2 cm long; flowering stems erect, stout, 10-30 (40) cm tall, smooth.

Leaves: Basal leaves withering before the flowers appear, 1 to 3, linear, somewhat rounded (crescent-shaped in cross-section), about as long as the stem, 2 mm wide, smooth, sheathing at the base, the margins entire; stem leaves lacking.

Flowers: Inflorescence a loose, terminal umbel of 2 to 10, erect to spreading, unequally stalked flowers, above several bracts, the stalks stout, 2-10 cm long; flowers violet-purple, funnel-shaped to narrowly bell-shaped, of 6 fused segments, 2-4 cm long; corolla lobes in 2 petal-like whorls, lanceolate, longer than the tube, ascending, the tips curved down; fertile stamens 3, sterile stamens 3, curved; pistil 1, 3-chambered.

Fruits: Capsules, egg-shaped, unstalked; seeds black.

CALOCHORTUS

1. Petals pale pink to purple, 3-5 cm long; sepals longer than petals *C. macrocarpus*
1. Petals white or yellowish-white, less than 2.5 cm long; sepals shorter than petals.
 2. Capsules nodding; petals with a circular gland; anthers abruptly long-pointed *C. apiculatus*
 2. Capsules erect; glands crescent-shaped; anthers more or less gradually tapering to a pointed tip.....
..... *C. lyallii*

***Calochortus apiculatus* Baker
three-spot mariposa lily**

HABITAT/RANGE:

Dry to mesic meadows, grassy slopes and open forests in the steppe and montane zones; locally frequent in SE BC; E to AB and S to MT, ID and WA.

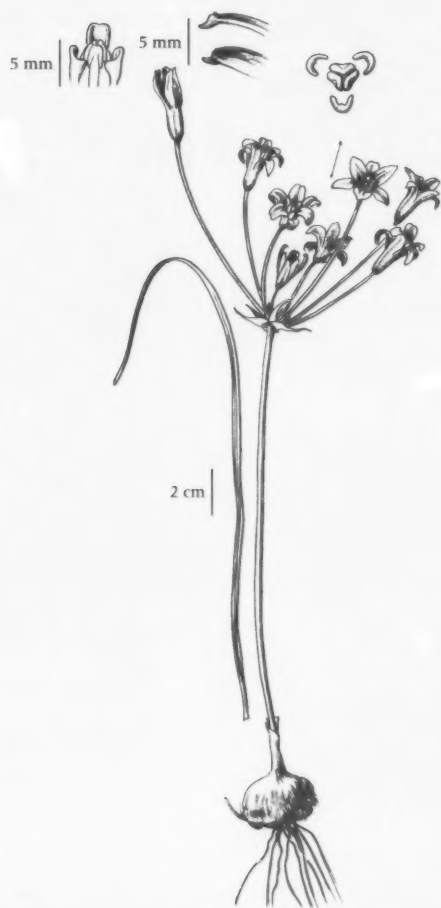
DESCRIPTION:

General: Perennial herb from a deep, papery-scaled, egg-shaped bulb; flowering stems usually erect, 10-30 cm tall, unbranched, smooth, often with bulblets in the axils of the leaves.

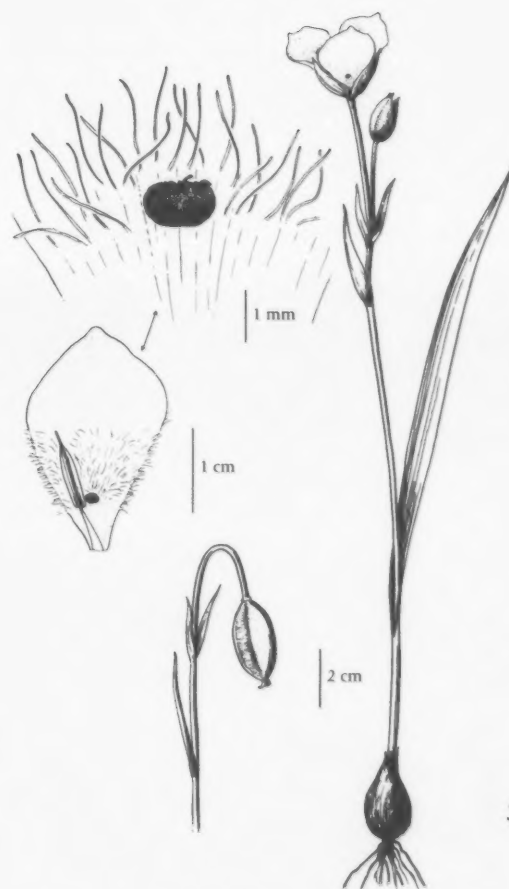
Leaves: Basal leaf solitary, linear to lanceolate, flat, 10-30 cm long, 5-15 mm wide, usually shorter than the stem, smooth, tapering to both ends, sheathing at the base, the margins entire; stem leaves lacking.

Flowers: Inflorescence a terminal cluster of 1 to 5, erect or spreading, stalked flowers, above 2 or more narrowly lanceolate, unequal bracts; flowers yellowish-white, sometimes with purplish pencilling, bowl-shaped; petals 3, distinct, egg-shaped to lanceolate, 2-2.5 cm long, clawed, fringed on the margins and moderately bearded on the inside with slender hairs on the lower half above the claw, the nectar gland small, nearly circular, dark-coloured; sepals oblong-lanceolate with long-tapering tip, shorter than the petals, smooth; stamens 6, anthers abruptly long-pointed at the tips; pistil 1, 3-chambered.

Fruits: Capsules, ellipsoid, about 2.5 cm long; 3-winged, nodding; seeds many, straw-coloured.



Brodiaea coronaria ssp. *coronaria*



JRJ

Calochortus apiculatus

Calochortus lyallii Baker

Lyall's mariposa lily

HABITAT/RANGE:

Dry to mesic forest openings in the montane zone; rare in SC BC; S to SE WA.

DESCRIPTION:

General: Perennial herb from a deep, papery-scaled, egg-shaped bulb; flowering stems usually erect, 10-50 cm tall, occasionally branched, smooth.

Leaves: Basal leaf single, linear, flat, 10-30 cm long, 2-20 mm wide, shorter than the stem, smooth, tapering to both ends, sheathing at the base, the margins entire; stem leaves single, bract-like, about at midpoint.

Flowers: Inflorescence a terminal cluster of 1 to 4, erect or spreading, stalked flowers, above 2 or more narrowly lanceolate, unequal bracts; flowers white, often tinged with purple, bell- to bowl-shaped; petals 3, distinct, egg-shaped to lanceolate, 2-2.5 cm long, short-clawed, fringed with long hairs on the margins, pimply-surfaced and sparsely bearded on the inside on the lower half above the claws, the nectar gland arching upward, a purple crescent above the gland; sepals lanceolate with long-tapering tips nearly as long as the petals, smooth; stamens 6, anthers tapering to pointed tips; pistil 1, 3-chambered.

Fruits: Capsules, ellipsoid, 1.5-2 cm long; 3-winged, erect; seeds many, straw-coloured.

Calochortus macrocarpus Dougl. var. *macrocarpus*

sagebrush mariposa lily

HABITAT/RANGE:

Dry shrublands, grasslands and open forests in the steppe and lower montane zones; frequent in SC BC, locally frequent in SE BC; S to MT, ID, NV and CA.

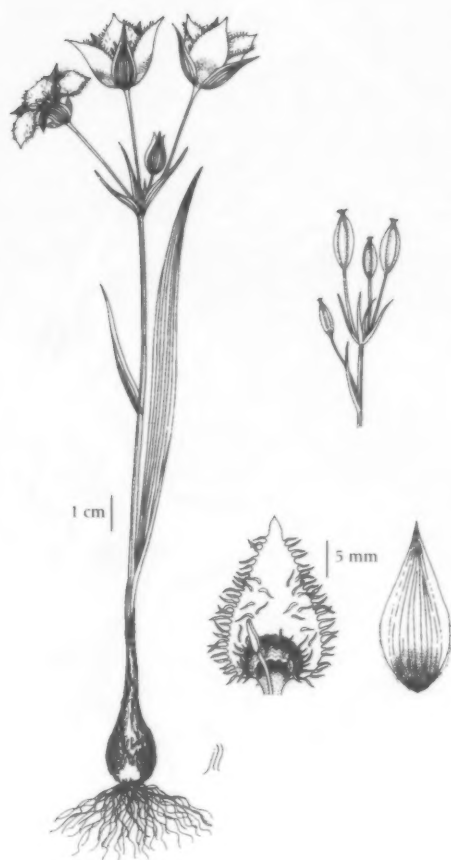
DESCRIPTION:

General: Perennial herb from a deep, papery-scaled, egg-shaped bulb; flowering stems erect, 20-50 cm tall, stout, usually unbranched, smooth, sometimes with bulblets in the axils of the leaves.

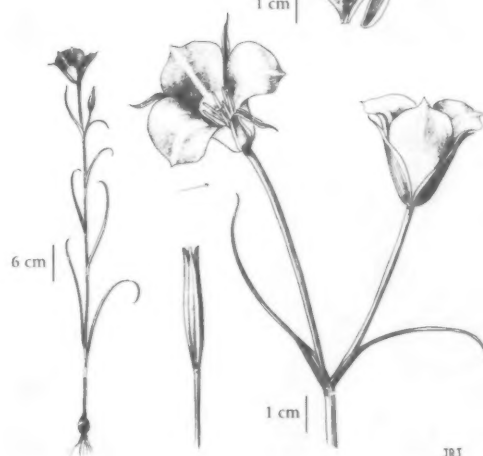
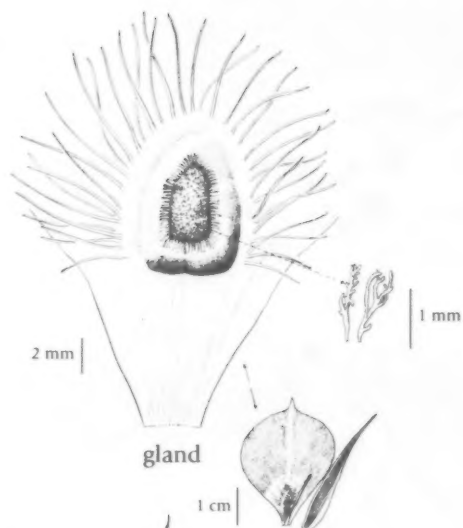
Leaves: Stem leaves alternate, few to several, linear, channeled, grass-like, to 50 cm long, decreasing in size up the stem, smooth, glaucous, curled at the tips sheathing at the base, the margins entire; basal leaves 5-10 cm long, withering.

Flowers: Inflorescence of 1 to 3, terminal, erect, stalked flowers, above 2 or more very slender, unequal bracts; flowers pink to purple, rarely white, broadly bell-shaped; petals 3, distinct, narrowly egg-shaped, 3-4.5 cm long, green-striped longitudinally on the outside, on the inside bearded with slender hairs and sometimes purple-banded above a basal, arrowhead-shaped, densely hairy nectar gland; sepals narrowly lanceolate with long slender tip, 4-5 cm long, generally longer than the petals, smooth; stamens 6, anthers blunt; pistil 1, 3-chambered.

Fruits: Capsules, narrowly lanceolate, 4-5.5 cm long; 3-angled, erect; seeds many, straw-coloured, flattened, with loose-fitting coats.



Calochortus lyallii



Calochortus macrocarpus var. *macrocarpus*

CAMASSIA

1. Tepals (petal-like segments) twisted together around ovaries after flowers wither; flowers more or less radially symmetric; fruiting stalks longer than the bracts *C. leichtlinii*
1. Tepals spreading apart, not twisted together around ovaries after flowers wither; flowers weakly bilaterally symmetric, with 5 tepals curving upward and 1 pointing downward; fruiting stalks shorter than the bracts *C. quamash*

Camassia leichtlinii* (Baker) S. Wats. ssp. *suksdorfii* (Greenm.) Gould*great camas****HABITAT/RANGE:**

Vernally moist meadows in the lowland zone; locally frequent on SE Vancouver Island and the Gulf Islands, one report also from adjacent mainland (Sechelt Peninsula); S to CA.

DESCRIPTION:

General: Perennial herb from a deep, egg-shaped bulb 2-4 cm long; flowering stems 20-100 cm tall, smooth.

Leaves: Basal leaves several to numerous, linear-lanceolate and grass-like, to 60 cm long, 1-2 cm wide, smooth, sheathing at the base, the margins entire; stem leaves lacking.

Flowers: Inflorescence a terminal raceme of 5 to many, stalked flowers, the stalks 1-4 cm long, spreading in flower, spreading to ascending in fruit; flowers pale to deep blue, rarely white, of 6 similar, distinct tepals, the tepals 20-40 mm long, 5-10 mm wide, twisting together over the ovaries when withered; stamens 6; pistil 1, 3-chambered.

Fruits: Capsules, egg-shaped to oblong, cross-ridged, 1-2.5 cm long; fruiting stalks often longer than bracts, spreading to ascending, curved in towards stem; seeds several to many, shiny black, 2-4 mm long.

Camassia quamash* (Pursh) Greene*common camas****HABITAT/RANGE:**

Mesic to vernal moist meadows and grasslands in the lowland, steppe and montane zones; locally frequent on SE Vancouver Island (ssp. *azurea* rare in peatlands on W Vancouver Island), the Gulf Islands and SE BC; E to AB and S to MT, ID and WA.

DESCRIPTION:

General: Perennial herb from a deep, egg-shaped bulb 2-4 cm long; flowering stems 20-70 cm tall, smooth.

Leaves: Basal leaves several to numerous, linear-lanceolate and grass-like, to 50 cm long, 1-3 cm wide, smooth, sheathing at the base, the margins entire; stem leaves lacking.

Flowers: Inflorescence a terminal raceme of 5 to many, stalked flowers, the stalks 1-2 cm long, spreading in flower, ascending to erect in fruit; flowers pale to deep blue, rarely white, weakly bilaterally symmetric, of 6 similar, distinct tepals, the tepals 15-40 mm long, 2-8 mm wide; stamens 6, anthers yellow to violet; pistil 1, 3-chambered.

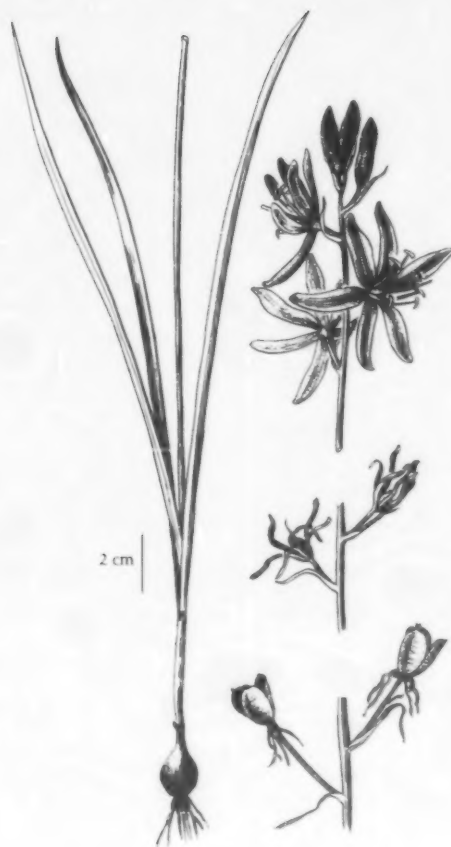
Fruits: Capsules, egg-shaped to oblong, cross-ridged, 1-2.5 cm long; fruiting stalks shorter than the bracts, ascending to erect, curved in towards stem; seeds several to many, shiny black, 2-4 mm long.

Notes: Three subspecies are known from BC:

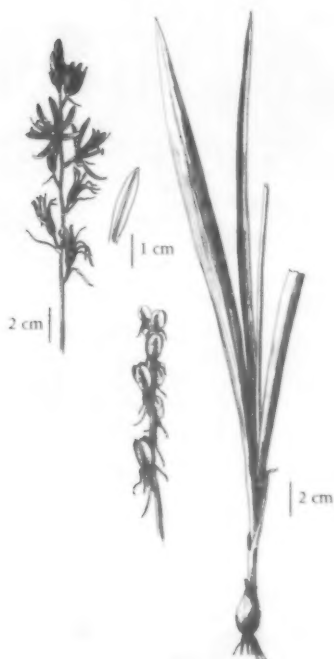
1. Capsule stalks spreading (+/- 45° angle from the stem); tepals pale bluish-violet, 3-6 mm wide ssp. *azurea* (Heller) Gould
1. Capsule stalks erect-appressed; tepals usually dark bluish-violet, 2-8 mm wide.
 2. Tepals 3- to 5-veined, mostly less than 6 mm wide, usually less than 30 mm long; stalks appressed in fruit; plants from the dry interior ssp. *quamash*
 2. Tepals 5- to 9-veined, mostly more than 6 mm wide, usually more than 30 mm long; stalks ascending to somewhat spreading in fruit; plants from the coast ssp. *maxima* Gould



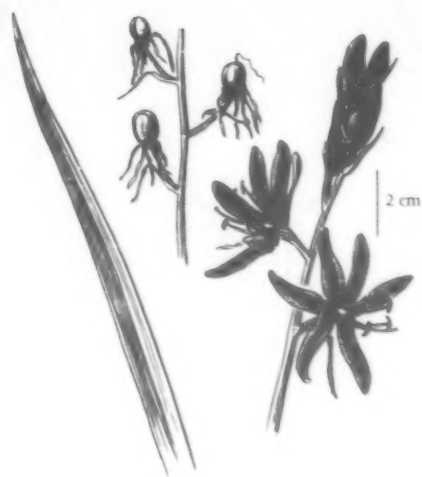
Camassia leichtlinii ssp. *suksdorfii*



Camassia quamash ssp. *azurea*



Camassia quamash ssp. *quamash*



Camassia quamash ssp. *maxima*

CLINTONIA

Clintonia uniflora (Menzies ex J.A. & J.H. Schult.) Kunth

queen's cup; blue-bead clintonia

HABITAT/RANGE:

Moist to mesic forests and glades from the lowland to lower subalpine zones; common in BC south of 56° N; N to S AK, E to SW AB and S to MT, ID and CA.

DESCRIPTION:

General: Perennial herb from a slender rhizome; flowering stems 4-15 (20) cm tall, hairy.

Leaves: Basal leaves 2 or 3, oblanceolate to oblong or elliptic, 10-25 cm long, 3-7 cm wide, sheathing at the base, shiny and slightly fleshy, variably long-soft-hairy beneath, the margins entire, hairy; stem leaves lacking, bracts 1 or 2.

Flowers: Inflorescence of solitary or rarely 2, erect flowers atop a leafless, 1- to 2-bracted, hairy stalk; flowers white, hairy, bell-shaped, about 2 cm long, of 6 similar, distinct tepals; stamens 6, the filaments loosely woolly-hairy; pistil 1, 2- or 3-chambered.

Fruits: Berries, globe- to egg-shaped, metallic blue, 6-12 mm long; seeds 10 to 15, black.

ERYTHRONIUM

1. Leaves mottled with green and dark brown; flowers white or pink; plants of low elevations.
 2. Flowers white *E. oregonum*
 2. Flowers pink *E. revolutum*
1. Leaves uniformly yellow-green, not mottled; flowers white or bright yellow; plants of moderate and high elevations.
 3. Flowers bright yellow *E. grandiflorum*
 3. Flowers white *E. montanum*

Erythronium grandiflorum Pursh ssp. *grandiflorum*

yellow glacier lily; yellow avalanche lily

HABITAT/RANGE:

Moist to mesic meadows, edges of snow-melt, along streams and occasionally in open forests in the montane to alpine zones; common throughout BC S of 53° N; E to AB and S to MT, UT and N CA.

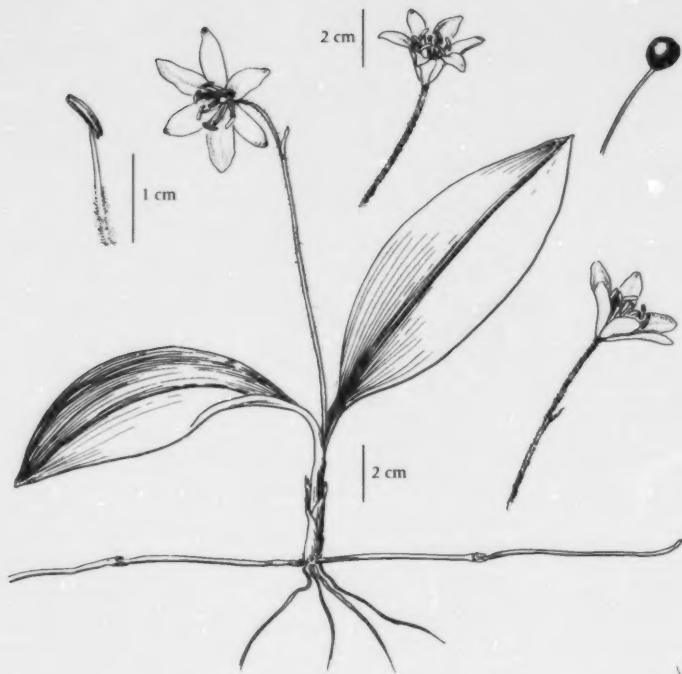
DESCRIPTION:

General: Perennial herb from a slender, 3- to 5-cm long bulb and an elongate, segmented corm; flowering stems 15-30 cm tall, smooth.

Leaves: Basal leaves 2, bright yellow-green, not mottled, oblong to egg-shaped, 10-20 cm long, smooth, narrowed gradually to broad, slightly winged stalks clasping the stem at the base, the margins entire but somewhat wavy; stem leaves lacking.

Flowers: Inflorescence usually a solitary flower atop a leafless, unbranched, smooth stem; flowers golden-yellow to cream, nodding, of 6 similar, distinct tepals, the tepals lanceolate, 2-4 cm long, 4-8 mm wide, strongly curved back; stamens 6, anthers white, yellow, or red; pistil 1, 3-chambered.

Fruits: Capsules, cylindric-club-shaped, erect, 3-5 cm long; seeds several to many (typically 20 to 50), brown, papery.



Clintonia uniflora



Erythronium grandiflorum ssp. *grandiflorum*

Erythronium montanum S. Wats.

white glacier lily; white avalanche lily

HABITAT/RANGE:

Moist meadows and open forests in the montane and subalpine zones; rare on Vancouver Island and the adjacent mainland (Mt. Waddington area); S to N OR.

DESCRIPTION:

General: Perennial herb from a slender, 3- to 4-cm long bulb attached to a chain of bead-like rhizome segments; flowering stems 15-35 cm tall, smooth.

Leaves: Basal leaves 2, bright yellow-green, not mottled, broadly egg-shaped to lance-oblong, 10-20 cm long, smooth, abruptly narrowed to almost wingless stalks 2-7 cm long, the margins entire; stem leaves lacking.

Flowers: Inflorescence of 1 to 3 (4) flowers atop a leafless, unbranched, smooth stem; flowers white with some yellow at the base on the inner surface, nodding, of 6 similar, distinct tepals, the tepals broadly lanceolate, 2.5-5 cm long, 7-15 mm wide, somewhat curved back; stamens 6, anthers yellow; pistil 1, 3-chambered.

Fruits: Capsules, cylindric-egg-shaped, erect, 2-3 cm long; seeds several to many, brown, egg-shaped, angular.

Erythronium oregonum Appleg. ssp. *oregonum*

white fawn lily

HABITAT/RANGE:

Dry to mesic meadows and open forests in the lowland zone; locally common on SE Vancouver Island, the Gulf Islands and the adjacent mainland; S to S OR.

DESCRIPTION:

General: Perennial herb from a narrowly egg-shaped, 3- to 5-cm long bulb and an elongate, segmented corm; flowering stems 15-35 cm tall, smooth.

Leaves: Basal leaves 2, dull dark green mottled with brown and white or pale green, lanceolate to oblong-elliptic, 10-20 cm long, smooth, abruptly narrowed to short, broad, somewhat winged stalks, the margins entire but often somewhat wavy; stem leaves lacking.

Flowers: Inflorescence of 1, sometimes 2 or 3, flowers atop a leafless, unbranched, smooth stem; flowers white with some yellow or orange at the base on the inner surface, nodding, of 6 similar, distinct tepals, the tepals broadly lanceolate, 3.5-5 cm long, curved back; stamens 6, anthers white or yellow; pistil 1, 3-chambered.

Fruits: Capsules, broadly club-shaped, erect, 3.5-5 cm long; seeds several to many, brown, egg-shaped, angular.

Erythronium revolutum J.E. Sm.

pink fawn lily

HABITAT/RANGE:

Moist forests and riverbanks in the lowland zone; locally frequent on Vancouver Island, rare on Valdez Island and on mainland at Kingcome Inlet; S to N CA.

DESCRIPTION:

General: Perennial herb from a narrowly egg-shaped, 3- to 5-cm long bulb attached to a chain of rhizome segments; flowering stems 15-35 cm tall, smooth.

Leaves: Basal leaves 2, dull dark green mottled with brown or white, broadly lanceolate to elliptic, 10-20 cm long, smooth, gradually narrowed to short, broad, narrowly winged stalks, the margins entire but often somewhat wavy; stem leaves lacking.

Flowers: Inflorescence of 1, rarely 2 or 3, flowers atop a leafless, unbranched, smooth stem; flowers rose-pink with yellow bands at the base on the inner surface, nodding, of 6 similar, distinct tepals, the tepals narrowly lanceolate, 3-5 cm long, curved back; stamens 6, anthers yellow; pistil 1, 3-chambered.

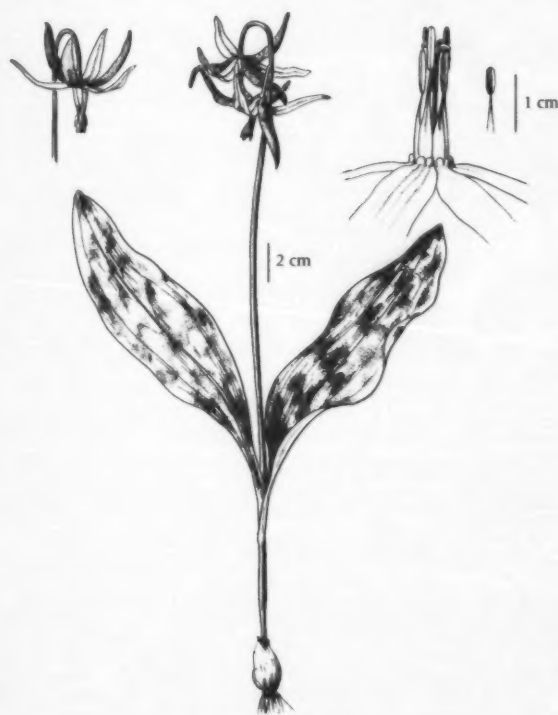
Fruits: Capsules, narrowly club-shaped to oblong, erect, 3-4 cm long; seeds several to many, brown, egg-shaped, angular.



Erythronium montanum



Erythronium oregonum ssp. *oregonum*



Erythronium revolutum

FRITILLARIA

1. Flowers bright yellow, fading to orange; stigmas entire; stamens about as long as tepals (petal-like segments) *F. pudica*
1. Flowers dull green to dark purplish-brown; stigmas deeply 3-lobed; stamens about half as long as tepals.
 2. Flowers not mottled; tepals ridged or fluted on inner surface along veins; capsules not winged *F. camschatcensis*
 2. Flowers mottled or spotted; tepals not ridged on inner surface; capsules winged *F. affinis*

***Fritillaria affinis* (Schult.) Sealy var. *affinis* (*F. lanceolata* Pursh)**

chocolate lily; checker lily

HABITAT/RANGE:

Dry to mesic grassy bluffs, meadows and open forests in the lowland and steppe to lower subalpine zones; common on SE Vancouver Island, the Gulf Islands and inland to SC BC, south of 52° N; S to ID and CA.

DESCRIPTION:

General: Perennial herb from a bulb of a few larger, fleshy scales and numerous small, rice-grain bulblets; stems 20-80 cm tall, slender to sturdy, smooth.

Leaves: Usually in 1 or 2 whorls of 3 to 5 on the stem, scattered and alternate above, narrowly lanceolate to lance-egg-shaped, 5-10 (15) cm long, 0.5-3 cm wide, smooth.

Flowers: Inflorescence a single nodding flower, or 2 to 5 relatively long-stalked flowers in a terminal cluster; flowers variably brownish-purple mottled with greenish-yellow, to yellowish-green mottled purple, broadly bell-shaped, of 6 similar, distinct tepals, the tepals oblong to egg-shaped, 2-4 cm long, 1-2 cm wide, with a long, yellowish-green nectar gland on inner surface near the base; stamens 6; pistil 1, 3-chambered.

Fruits: Capsules, erect, cylindric-egg-shaped, 6-angled, winged on the angles, 2 cm long; seeds numerous, flattened.

Notes: This species has long been known as *F. lanceolata*, an illegitimate name.

***Fritillaria camschatcensis* (L.) Ker-Gawl.**

northern riceroor; riceroor fritillary; black lily

HABITAT/RANGE:

Moist tideflats, meadows, open forests, rocky beaches and streambanks in the lowland to subalpine zones; common along coast, infrequent inland; N to AK and YT and S to W WA and OR.

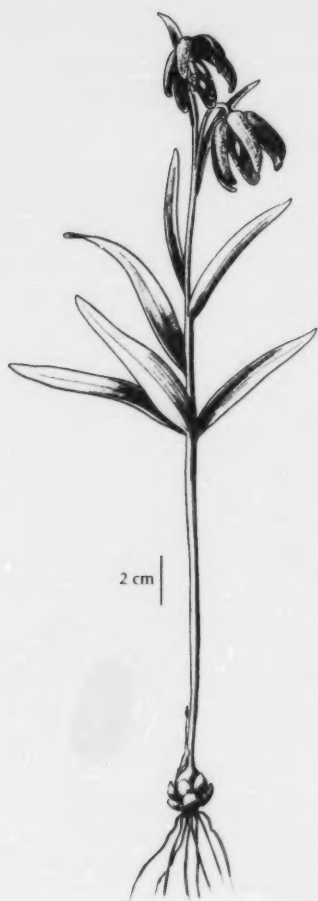
DESCRIPTION:

General: Perennial herb from a bulb of several larger, fleshy scales subtended by numerous small, rice-grain bulblets; stems 20-60 (80) cm tall, sturdy, smooth.

Leaves: Usually in 2 or 3 main whorls of 5 to 10 on the upper part of the stem, with a few scattered and alternate near the tip, lanceolate, 5-10 cm long, 0.5-2.5 cm wide, smooth.

Flowers: Inflorescence of usually several, spreading to nodding, relatively short-stalked flowers in the axils of upper leaves; flowers bronze to purplish-brown or nearly black, rarely yellowish-green, rarely mottled, narrowly bell-shaped, of 6 similar, distinct tepals, the tepals oblong-lanceolate to elliptic or egg-shaped, 2-3 cm long, 6-12 mm wide, ridged lengthwise on the inner surface; stamens 6; pistil 1, 3-chambered.

Fruits: Capsules, erect, barrel-shaped, bluntly 6-angled, wings lacking, 2-3.5 cm long; seeds numerous, flattened.



Fritillaria affinis var. *affinis*



Fritillaria camschatcensis

***Fritillaria pudica* (Pursh) Spreng.**

yellow bell; yellow fritillary

HABITAT/RANGE:

Dry shrublands, grasslands and open coniferous forests in the steppe and lower montane zones; infrequent in S BC east of the Coast-Cascade Mountains; E to AB and S to NM, UT, NV and N CA.

DESCRIPTION:

General: Perennial herb from a bulb of a few larger, fleshy scales and numerous small, rice-grain bulblets; stems 10-25 cm tall, slender to sturdy, smooth.

Leaves: Usually a nearly opposite pair, sometimes several and alternate to nearly whorled, linear to narrowly lanceolate, 3-15 cm long, 2-12 mm wide, smooth.

Flowers: Inflorescence of 1 or rarely 2, drooping flowers atop the stem; flowers yellow, often faintly striped with purple or brown near the base, fading to orange or brick-red, narrowly bell-shaped, of 6 similar, distinct tepals, the tepals lance-oblong to lanceolate, 1.5-2.5 cm long, 4-8 mm wide, with a small, green nectar gland on inner surface near the base; stamens 6; pistil 1, 3-chambered.

Fruits: Capsules, erect, cylindric to egg-shaped, 6-angled, wings lacking, 2-3 cm long; seeds numerous, flattened.

HYACINTHOIDES

***Hyacinthoides hispanica* (Mill.) Roth. (*Endymion hispanicus* [Mill.] Chouard, *Scilla hispanica* Mill.)**

Spanish bluebells

HABITAT/RANGE:

Mesic to moist edges of forests, roadsides and waste places in the lowland zone; locally frequent garden escape on S Vancouver Island, the Gulf Islands and the adjacent mainland, rare on the Queen Charlotte Islands; introduced from Europe.

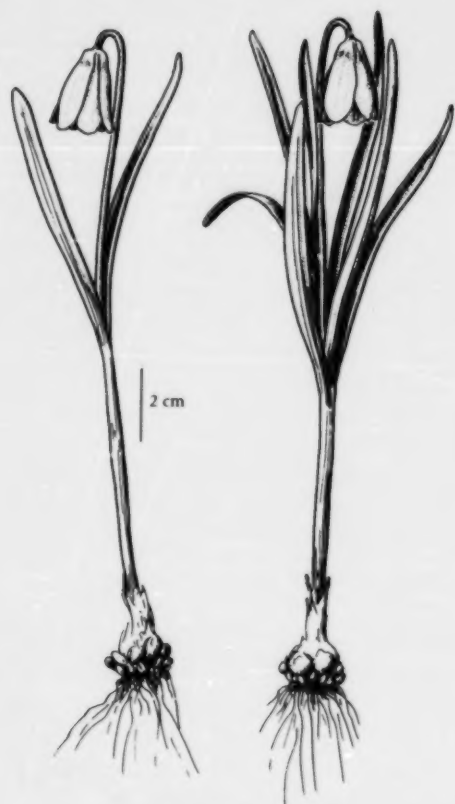
DESCRIPTION:

General: Perennial herb from a scaly, egg-shaped, 2- to 3-cm long bulb; flowering stems erect, 20-50 cm tall, smooth.

Leaves: Basal leaves several, strap-shaped, grass-like, 20-45 cm long, 1-3 cm wide, smooth, sheathing at the base, the margins entire; stem leaves lacking.

Flowers: Inflorescence an elongate, erect, terminal cluster of 10 to 16, stalked flowers, the stalks 0.5-3 cm long, ascending, subtended by a pair of bluish bracts; flowers blue to pink-purple, sometimes whitish, broadly bell-shaped, ascending to nodding, of 6 similar tepals fused at the base, the tepals narrowly egg-shaped, spreading or flaring, 1.5-2 cm long; stamens 6, attached at the middle of the perianth; pistil 1, 3-chambered.

Fruits: Capsules, 3-lobed; seeds few to several, egg-shaped, black.



Fritillaria pudica



Hyacinthoides hispanica

LILIUM

1. Flowers usually several in a raceme, nodding; tepals (petal-like segments) yellow-orange, strongly bent back *L. columbianum*
1. Flowers 1 to 3, solitary or in a somewhat umbel-like cluster, erect; tepals orange-red to brick-red, not bent back *L. philadelphicum*

***Lilium columbianum* Hanson ex Baker** (*L. canadense* L. var. *parviflorum* Hook.)

tiger lily; Columbia lily

HABITAT/RANGE:

Mesic open forests, roadsides, clearings, thickets and meadows in the steppe to alpine zones; common throughout S BC south of 54° N; S to ID and N CA.

DESCRIPTION:

General: Perennial herb from an egg-shaped, fleshy-scaled, white bulb 3-5 cm long; stems 40-120 cm tall, sturdy, smooth.

Leaves: Usually in several whorls of 6 to 9, the upper and lowermost stem leaves often scattered and alternate, lanceolate, 4-10 cm long, 1.5-3 cm wide, smooth.

Flowers: Inflorescence of several to many, large, showy, nodding flowers in a terminal raceme; flowers yellow-orange to reddish-orange with dark red or purple spots about the centre, bell-shaped, of 6 similar, distinct tepals, the tepals broadly lanceolate, 4-6 cm long, about 1 cm wide, strongly bent back; stamens 6; pistil 1, 3-chambered.

Fruits: Capsules, erect, barrel-shaped, sharply 6-angled, 3-5 cm long; seeds numerous, flattened.

***Lilium philadelphicum* L. var. *andinum* (Nutt.) Ker-Gawl.**

wood lily

HABITAT/RANGE:

Mesic meadows, edges of forests and open forests (often on limestone) in the steppe and montane zones; infrequent in the Peace River region, locally frequent in SE BC; E to PQ and S to KY, IA, TX and NM.

DESCRIPTION:

General: Perennial herb from a kidney-shaped, fleshy-scaled, whitish bulb 2-3 cm wide; stems 30-70 cm tall, sturdy, smooth.

Leaves: Usually in 1 or 2 whorls of 6 on the upper stem, the lower leaves alternate, usually overlapping, linear to narrowly lanceolate, 5-10 cm long, 0.3-1.2 cm wide, smooth.

Flowers: Inflorescence usually of a single flower, sometimes 2 or 3 in an umbel-like cluster, large, showy, erect atop the stem; flowers orange to brick-red, lighter and purplish-dotted in the throat, goblet-shaped, of 6 similar, distinct tepals, the tepals narrowly egg-shaped, tapering to a long claw, 5-7 cm long, 1-2 cm wide; stamens 6; pistil 1, 3-chambered.

Fruits: Capsules, erect, cylindric-egg-shaped, not sharply 6-angled, 2-5 cm long; seeds numerous, flattened.



Lilium columbianum



Lilium philadelphicum var. *andinum*

LLOYDIA

Lloydia serotina (L.) Reichenb. (*L. serotina* ssp. *flava* Calder & Taylor = var. *flava*)

alp lily

HABITAT/RANGE:

Mesic rocky slopes, rock crevices and gravelly meadows in the upper subalpine and alpine zones; var. *flava* – infrequent and endemic on NW Vancouver Island and the Queen Charlotte Islands; var. *serotina* – frequent in scattered localities throughout W BC; circumboreal, N to AK, YT and NT, E to NF and S to NM, UT, NV and NW OR.

DESCRIPTION:

General: Perennial herb from a small, oblong, greyish, fibrous-coated bulb at the end of a rhizome; flowering stems 4-15 cm tall, smooth.

Leaves: Basal leaves several, linear, grass-like, somewhat fleshy, 2-10 (15) cm long, about 1 mm wide, smooth; stem leaves 2 to 4, alternate, reduced upward, 1-4 cm long and 1-2 mm wide.

Flowers: Inflorescence of 1 or rarely 2, erect to nodding flowers atop the stem; flowers creamy-white with purple or green veins, often tinged with rose on the outside, broadly top-shaped, 8-13 mm long, of 6 similar, distinct tepals, the tepals oblong or broadly lanceolate; stamens 6; pistil 1, 3-chambered.

Fruits: Capsules, egg-shaped, 6-8 mm long; seeds numerous, crescent-shaped, flattened.

Notes: Two varieties occur in BC:

1. Tepals with purple veins; basal leaves often shorter than the flowering stems var. *serotina*
1. Tepals with yellow or green veins; basal leaves often longer than flowering stems
..... var. *flava* (Calder & Taylor) Boivin

MAIANTHEMUM

1. Tepals (petal-like segments) 4; leaves 2 or 3, more or less stalked, heart-shaped or nearly so at the base.
 2. Leaves nearly unstalked, the blades hairy beneath and the margins fringed with long hairs *M. canadense*
 2. Leaves distinctly stalked, the blades smooth *M. dilatatum*
1. Tepals 6; leaves 2 to 4 or numerous, unstalked, lanceolate or elliptic.
 3. Flowers many, nearly unstalked, in large panicles *M. racemosum*
 3. Flowers few, distinctly stalked, in racemes.
 4. Leaves more than 4, unstalked, abruptly narrowed at their bases *M. stellatum*
 4. Leaves 2 to 4 (usually 3), tapering to somewhat sheathing bases *M. trifolium*

Maianthemum canadense Desf.

wild lily-of-the-valley; Canadian mayflower

HABITAT/RANGE:

Moist to mesic forests and clearings in the montane zone; frequent in E BC, north of 53° N; N to NT, E to NF and S to ME, PA, NC, GA, TN, IA, NE and WY.

DESCRIPTION:

General: Perennial herb from a slender rhizome; stems 5-25 cm tall, hairy at least in the upper part.

Leaves: Leaves of flowering stems 2 to 3, alternate, egg-shaped, rounded to somewhat heart-shaped at the base, 3-10 cm long, 2-5 cm wide, short-stalked to nearly unstalked, smooth above, hairy beneath, the margins entire, fringed with long hairs; basal leaves lacking.

Flowers: Inflorescence a loose, cylindrical, terminal cluster of several to many spreading flowers; flowers cream to white, wheel-shaped, 4-6 mm across, of 4 similar, distinct tepals, the tepals oblong, blunt, about 2 mm long, becoming reflexed; stamens 4, shorter than tepals; pistil 1, 2-chambered.

Fruits: Berries, globe-shaped, at first green mottled with brown, then pale red, 3-4 mm wide; seeds 1 or 2.



Lloydia serotina var. *serotina*



Maianthemum canadense

Maianthemum dilatatum* (A. Wood) Nels. & J.F. Macbr.*false lily-of-the-valley**; two-leaved false Solomon's-seal**HABITAT/RANGE:**

Mesic to wet forests and streambanks in the lowland and montane zones; common in coastal BC; N to AK and YT and S to ID and CA.

DESCRIPTION:

General: Perennial herb from a slender rhizome; stems 10-35 cm tall, smooth.

Leaves: Leaves of flowering stems 1 to 3 (usually 2), alternate, broadly heart- to arrowhead-shaped, distinctly heart-shaped at the base, 5-12 cm long, about as wide, on 2- to 10-cm long stalks, smooth above and beneath, the margins entire, rough short-hairy; basal leaves lacking.

Flowers: Inflorescence a loose, cylindrical, terminal cluster of several to many spreading flowers; flowers cream to white, wheel-shaped, 5-8 mm across, of 4 similar, distinct tepals, the tepals oblong, blunt, 2-3 mm long, becoming reflexed; stamens 4, shorter than tepals; pistil 1, 2-chambered.

Fruits: Berries, globe-shaped, spotted, red, 5-6 mm wide; seeds 1 to 4.

Maianthemum racemosum* (L.) Link ssp. *amplexicaule* (Nutt.) LaFrankie (*Smilacina racemosa* [L.] Desf. var. *amplexicaulis* [Nutt. ex Baker] S. Wats.)*false Solomon's-seal****HABITAT/RANGE:**

Moist to mesic forests, streambanks, meadows and clearings in the lowland and steppe to subalpine zones; common throughout BC south of 56° N, rare northward; N to AK, E to SK and S to SD, TX, NM, AZ and CA.

DESCRIPTION:

General: Perennial herb from a stout, fleshy, knotty, brownish rhizome; stems erect to stiffly arched-ascending, 30-100 cm tall, finely spreading-hairy above.

Leaves: Stem leaves 5 to 12, alternate often in two rows, oblong-elliptic to egg-shaped, tapering to a frequently clasping base, 5-20 cm long, 4-8 cm wide, unstalked or short-stalked, short stiff-hairy on undersurface, the margins entire; basal leaves lacking.

Flowers: Inflorescence a branched, egg- or pyramid-shaped, (3) 5- to 12-cm long, terminal cluster of numerous, spreading, short-stalked flowers; flowers white, wheel-shaped, of 6 similar, distinct tepals, the tepals 1.5-3 mm long, narrowly oblong; stamens 6, longer and wider than tepals; pistil 1, 3-chambered.

Fruits: Berries, globe-shaped, at first mottled green and red, eventually all red, 5-7 mm wide; seeds usually 1 or 2.

Maianthemum stellatum* (L.) Link (*Smilacina stellata* [L.] Desf.)*star-flowered false Solomon's-seal****HABITAT/RANGE:**

Moist to mesic (occasionally dry) forests, streambanks, clearings and meadows in the montane to lower alpine zones; common throughout BC, except the north coast; N to AK, YT and NT, E to NF and S to MA, PA, VA, TN, AR, OK, NM, AZ and CA.

DESCRIPTION:

General: Perennial herb from a slender, pale rhizome; stems erect to arched-ascending, 20-60 cm tall, finely spreading-hairy.

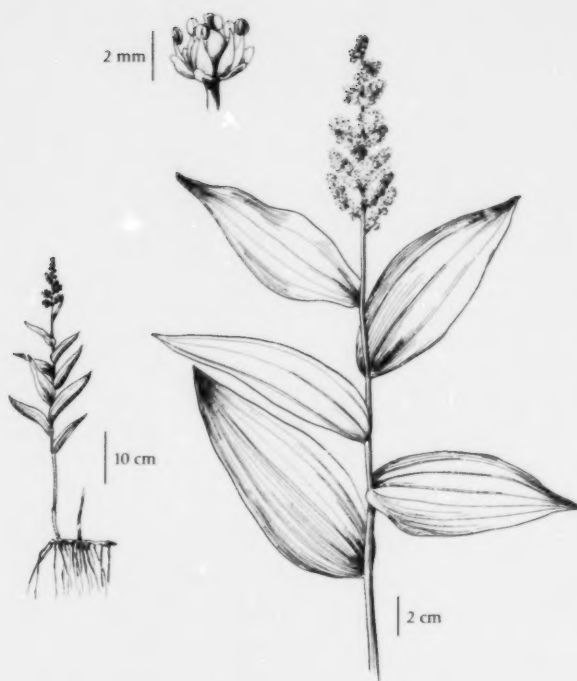
Leaves: Stem leaves 5 to 11, alternate (often in 2 rows), flat to folded, lanceolate to oblong-elliptic, 5-15 cm long, 2-4 cm wide, tapering to a sometimes weakly clasping base, unstalked, short-hairy on under surface, the margins entire; basal leaves lacking.

Flowers: Inflorescence an unbranched, 2- to 7-cm long, terminal cluster of 5 to 10 (15), spreading, stalked flowers, the stalks at least as long as the flowers; flowers creamy-white, star-shaped, of 6 similar, distinct tepals, the tepals 4-7 mm long, narrowly oblong to lanceolate, spreading; stamens 6, shorter than tepals; pistil 1, 3-chambered.

Fruits: Berries, globe-shaped, at first greenish-yellow striped with blue-purple, eventually dark blue to reddish-black, 7-10 mm wide; seeds usually 1 or 2.



Maianthemum dilatatum



Maianthemum racemosum ssp. *amplexicaule*



Maianthemum stellatum

***Maianthemum trifolium* (L.) Sloboda (*Smilacina trifolia* [L.] Desf.)**
three-leaved false Solomon's-seal

HABITAT/RANGE:

Moist to wet forests, bogs, fens and peaty streambanks in the montane and subalpine zones; infrequent in N BC, north of 56° N and east of the Coast Mountains; N to AK, YT and NT, E to NF and S to MA, PA, MI, WI and MN.

DESCRIPTION:

General: Perennial herb from a very slender, scaly, whitish rhizome; stems erect but slender and weak, 5-20 cm tall, smooth.

Leaves: Leaves of flowering stems 2 to 4 (usually 3), alternate, elliptic to oblong-lanceolate, tapering to a somewhat sheathing base, 3-12 cm long, 1-4 cm wide, unstalked, smooth, the margins entire; basal leaves lacking.

Flowers: Inflorescence a slender, unbranched, 2- to 5-cm long, terminal cluster of 2 to 12, spreading, stalked flowers, the stalks distinctly longer than the flowers; flowers creamy-white to greenish-white, star-shaped, of 6 similar, distinct tepals, the tepals 3-4 mm long, spreading; stamens 6, shorter than tepals; pistil 1, 3-chambered.

Fruits: Berries, globe-shaped, dark red, about 5 mm wide; seeds 1 or 2.

NARCISSUS

1. Tepals (petal-like segments) predominantly yellow; corona (perianth crown) at least half as long as tepals *N. pseudo-narcissus*
1. Tepals predominantly white; corona (perianth crown) much less than half as long as tepals *N. poeticus*

***Narcissus poeticus* L.**
poet's narcissus

HABITAT/RANGE:

Mesic to moist fields, roadsides and waste places in the lowland zone; rare garden escape on S Vancouver Island; introduced from Europe.

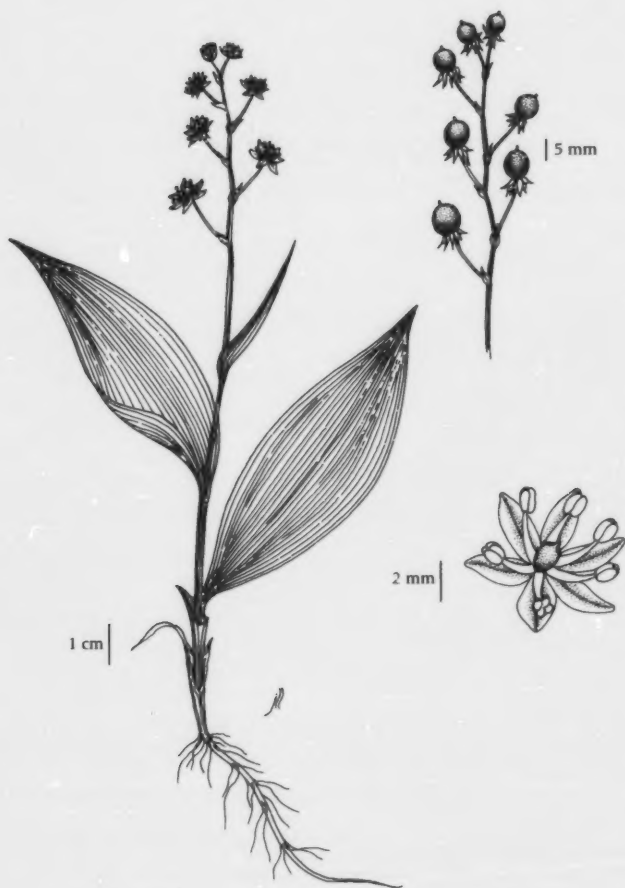
DESCRIPTION:

General: Perennial herb from an egg-shaped bulb 2-3 cm long; flowering stems 30-50 cm tall, more or less compressed, 2-edged, smooth.

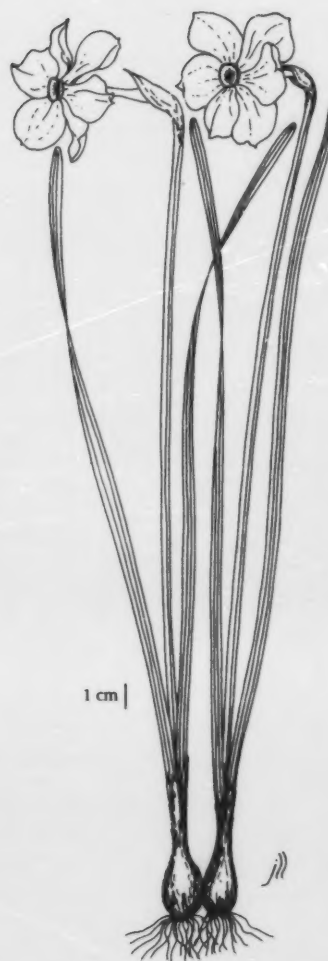
Leaves: Basal leaves few to several, linear, erect, about as long as the stem, 6-13 mm wide, flat, glaucous, smooth, the margins entire; stem leaves lacking.

Flowers: Inflorescence usually of solitary, terminal, nodding, short-stalked flowers, the stalks issuing from a membranous tubular bract; flowers white, of 6 similar segments fused at the base into a 2.5-cm long tube that spreads to the broadly egg-shaped, spreading, overlapping tepals, the shallow cup-like crown (the corona, rising from between the segments and the stamens) several times shorter than the tepals, deep yellow or whitish, frilly and red-edged at the mouth; stamens 6; pistil 1, 3-chambered; ovaries inferior.

Fruits: Capsules, triangular-egg-shaped, about 1.5 cm long; seeds several to many.



Maianthemum trifolium



Narcissus poeticus

Narcissus pseudo-narcissus L.
daffodil

HABITAT/RANGE:

Mesic to moist fields, edges of forests, roadsides and waste places in the lowland zone; rare garden escape on S Vancouver Island, the Gulf Islands and the lower mainland; introduced from Europe.

DESCRIPTION:

General: Perennial herb from an egg-shaped bulb 2-3 cm long, often with bulblets; flowering stems 20-40 cm tall, more or less compressed, 2-edged, smooth.

Leaves: Basal leaves few to several, linear, erect, 12-35 cm long, 5-12 mm wide, flat to somewhat channelled, glaucous, smooth, the margins entire; stem leaves lacking.

Flowers: Inflorescence of solitary, terminal, horizontal or drooping to ascending, short-stalked flowers, the stalks 3-10 mm long, issuing from a membranous tubular bract; flowers typically pale yellow, 3-6 cm long, of 6 similar segments fused at the base into a 1- to 2.5-cm long tube that spreads to the oblong or egg-shaped, ascending, wavy or twisted tepals, the trumpet-like crown (the corona, rising from between the segments and the stamens) about as long as the tepals, deep yellow, frilly at the mouth; stamens 6, shorter than the flowers; pistil 1, 3-chambered; ovaries inferior.

Fruits: Capsules, egg-shaped to nearly globe-shaped, 1-2.5 cm long; seeds several to many.

Notes: Probably not truly naturalized, but long persisting and multiplying vegetatively by bulblets. Most of the plants found apparently naturalized in BC are probably hybrids or cultivated forms of this species and not the wild species itself.

ORNITHOGALUM

Ornithogalum umbellatum L.
star-of-Bethlehem

HABITAT/RANGE:

Mesic to dry roadsides, fields and waste places in the lowland zone; rare garden escape, but apparently re-seeding and established on S Vancouver Island and the adjacent mainland; introduced from Europe.

DESCRIPTION:

General: Perennial herb from an egg-shaped bulb about 2.5 cm long, usually with bulblets; flowering stems 10-30 cm tall, smooth.

Leaves: Basal leaves few to several, linear and grass-like, limp, 15-30 cm long, 5-6 mm wide, green, grooved, with a central white stripe, smooth, the margins entire; stem leaves lacking.

Flowers: Inflorescence a somewhat flat-topped, umbel-like, terminal cluster of 5 to 15, stalked flowers, the stalks 4-10 cm long, ascending; flowers white striped with green on the outside, star-shaped, of 6 similar, distinct tepals, the tepals oblong-lanceolate, 1.5-2 cm long; stamens 6, shorter than the flowers; pistil 1, 3-chambered.

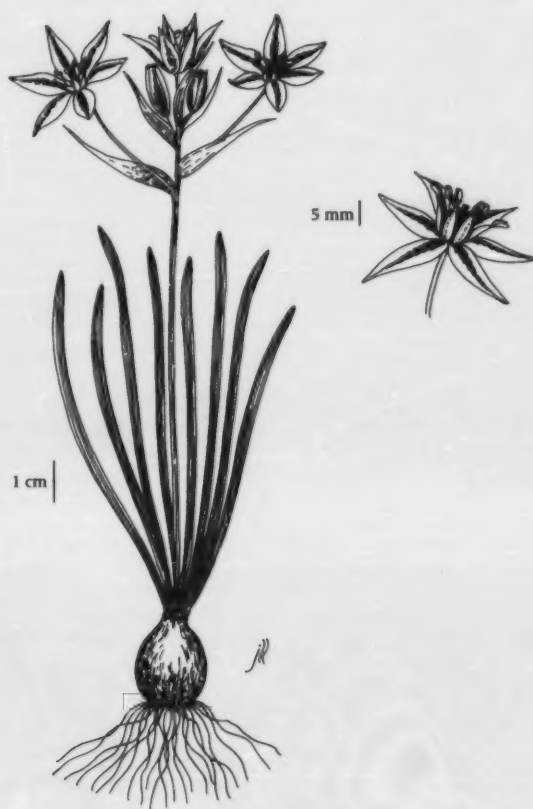
Fruits: Capsules, egg-shaped, 6-angled, 1-1.5 cm long; seeds several to numerous, black.

PROSARTES

1. Flowers 15-28 mm long; stamens concealed by tepals; tepals flared only at tips *P. smithii*
1. Flowers 8-10 mm long; stamens exerted, or at least not concealed by tepals; tepals broadly flared.
 2. Leaves usually hairy on upper surface; hairs fringing leaf margins pointed forward; ovaries ellipsoid, pointed; styles usually hairy; fruits smooth or hairy, but not warty-roughened, 4- to 6-seeded
..... *P. hookeri*
 2. Leaves smooth on upper surface; hairs fringing leaf margins spreading; ovaries rounded; styles smooth; fruits warty-roughened, 6- to 15-seeded *P. trachycarpa*



Narcissus pseudo-narcissus



Ornithogalum umbellatum

Prosartes hookeri Torr. var. *oregana* (S.Wats.) Kartesz (*Disporum hookeri* [Torr.] Nichols. var. *oreganum* [S. Wats.] Q. Jones)

Hooker's fairybells

HABITAT/RANGE:

Moist to mesic forests in the lowland and montane zones; common in BC south of 55° N; E to AB and W MT, ID and NW OR.

DESCRIPTION:

General: Perennial herb from a strong but slender rhizome; stems erect, 30-100 cm tall, few-branched, spreading-curly-hairy to at least above.

Leaves: Stem leaves alternate, several to many, egg-shaped to broadly lanceolate, 5-15 cm long, 2-6 cm wide, unstalked, heart-shaped and somewhat clasping at the base, short-hairy below and sparsely hairy to nearly smooth above, the margins fringed with forward-pointing hairs; basal leaves lacking.

Flowers: Inflorescence of 1 to 3 (usually 2), stalked flowers drooping from branch tips; flowers creamy-white, narrowly bell-shaped, of 6 similar, distinct tepals, the tepals 10-15 (18) mm long, narrowly elliptic, flaring from the middle or lower; stamens 6, mostly slightly longer than the tepals; pistil 1, 3-chambered; styles usually hairy at least near the base.

Fruits: Berries, broadly egg-shaped, yellow to ultimately red, 7-10 mm long, smooth or minutely hairy; seeds 4 to 6.

Prosartes smithii (Hook.) Utech, Shinwari & Kawano (*Disporum smithii* [Hook.] Piper)

Smith's fairybells

HABITAT/RANGE:

Moist forests and streambanks in the lowland zone; rare on S Vancouver Island; S to CA.

DESCRIPTION:

General: Perennial herb from a strong but slender rhizome; stems erect, 30-90 cm tall, branched, spreading-curly-hairy to nearly smooth.

Leaves: Stem leaves alternate, several to many, broadly to narrowly egg-shaped, 4-12 cm long, unstalked, rounded to somewhat heart-shaped and somewhat clasping at the base, sparsely hairy below and smooth above, the margins mostly not fringed with hairs; basal leaves lacking.

Flowers: Inflorescence of 1 to 3 (6), stalked flowers in clusters drooping from branch tips, the stalks sturdy and hairy; flowers whitish, cylindric, of 6 similar, distinct tepals, the tepals 15-28 mm long, lance-oblong, flaring slightly at the tips; stamens 6, shorter than the tepals; pistil 1, 3-chambered, the style hairy throughout.

Fruits: Berries, broadly ellipsoid, orange to red, 12-15 mm long, smooth; seeds 5 to 9.

Prosartes trachycarpa S. Wats. (*Disporum trachycarpum* [S. Wats.] Benth. & Hook.)

rough-fruited fairybells

HABITAT/RANGE:

Moist to dry forests, forest edges, thickets and clearings in the steppe and montane zones; common in BC east of the Coast-Cascade Mountains and S of 56° N; E to MB and S to SD, NM, AZ and OR.

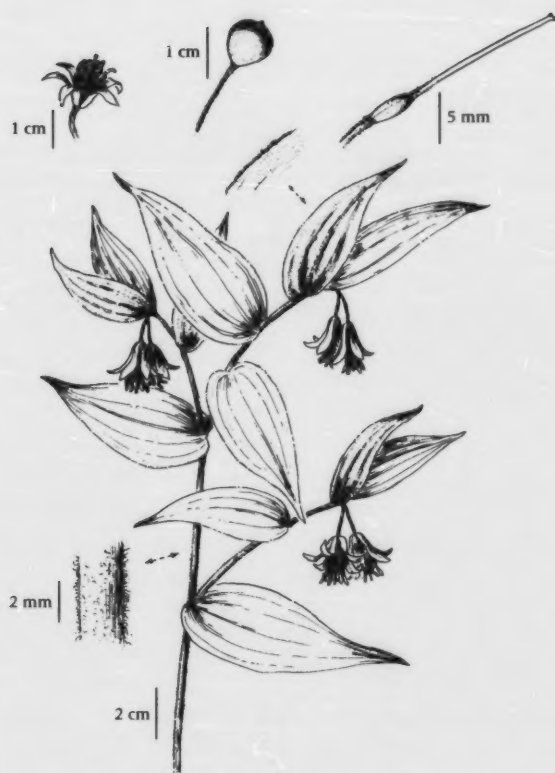
DESCRIPTION:

General: Perennial herb from a strong but slender rhizome; stems erect, 30-70 cm tall, few-branched, spreading curly-hairy.

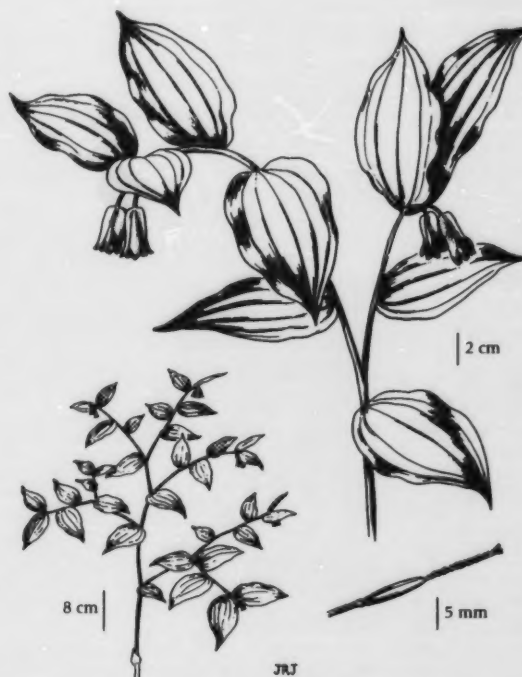
Leaves: Stem leaves alternate, several to many, broadly to narrowly egg-shaped, 3-10 cm long, unstalked, somewhat heart-shaped to rounded and somewhat clasping at the base, often spreading-hairy below, smooth above, the margins fringed with spreading hairs; basal leaves lacking.

Flowers: Inflorescence of 1 or 2, stalked flowers drooping from branch tips, the stalks sturdy and hairy; flowers creamy-white, narrowly bell-shaped, of 6 similar, distinct tepals, the tepals 8-15 mm long, lance-oblong, flaring from the middle or lower; stamens 6, equalling or slightly longer than the tepals; pistil 1, 3-chambered; styles smooth.

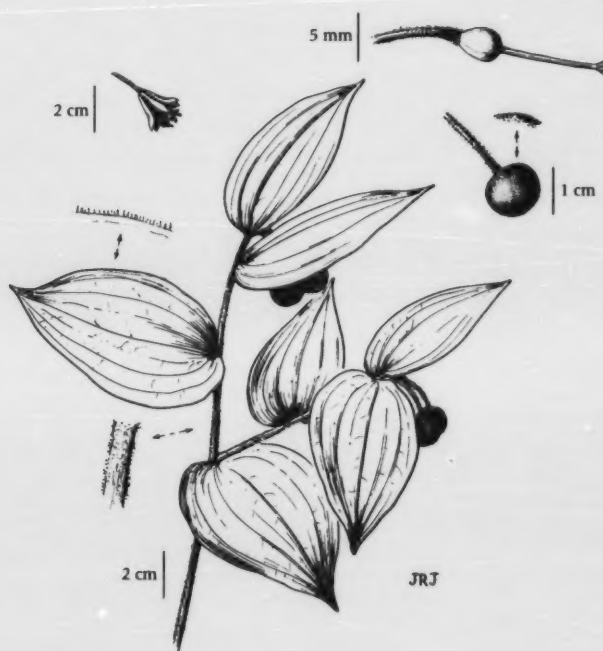
Fruits: Berries, squat-globe-shaped but somewhat 3-lobed, at first green, becoming orange to red, 7-10 mm long, the surface velvety and distinctly warty-roughened; seeds 6 to 12.



Prosarles hookeri var. *oregana*



Prosarles smithii



Prosarles trachycarpa

STENANTHIUM

Stenanthium occidentale A. Gray

western mountainbells; bronze-bells

HABITAT/RANGE:

Moist to wet open forests, thickets, boggy meadows, streambanks and rocky slopes in the montane to alpine zones; frequent in SW and SE BC north to 52° N, rare in extreme SC BC; E to AB and S to MT, ID and CA.

DESCRIPTION:

General: Perennial herb from a scaly, narrowly egg-shaped bulb 1-4 cm long; flowering stems erect, 20-50 cm tall, smooth.

Leaves: Basal leaves 2 or 3, narrowly lanceolate and grass-like, 10-30 cm long, 3-20 mm wide, smooth, sheathing at the base, the margins entire; stem leaves 2 or 3 much-reduced bracts.

Flowers: Inflorescence an elongate, narrow, terminal cluster of 5 to 25, stalked flowers, the stalks 1-3 cm long, ascending to erect; flowers greenish-yellow to brownish-purple, narrowly bell-shaped, usually nodding, of 6 similar tepals fused at the base, the tepals narrowly lanceolate, 8-15 mm long, the gradually tapering tips curved back; stamens 6; pistil 1, 3-chambered.

Fruits: Capsules, oblong-lanceolate, slenderly 3-beaked, erect, 1-2 cm long; seeds several, oblong, flat, winged at both ends, 2-4 mm long.

STREPTOPUS

1. Plants usually branched; leaves with clasping bases; leaf margins not fringed with hairs; stems not hairy at the nodes; tepals greenish-white *S. amplexifolius*
1. Plants usually unbranched; leaves not clasping; leaf margins fringed with hairs; stems hairy at the nodes; tepals rose.
 2. Flowers shallowly bowl-shaped, the lobes wide-spreading; tepals about 2.5 mm long *S. streptopoides*
 2. Flowers bell-shaped, the lobes curved back only at the tips; tepals about 10 mm long *S. lanceolatus*

Streptopus amplexifolius (L.) DC. (*S. amplexifolius* var. *denticulatus* Fassett and var. *americanus* Schult. = var. *amplexifolius*)

clasping twistedstalk

HABITAT/RANGE:

Moist forests, streambanks, thickets, avalanche tracks and clearings in the lowland and steppe to subalpine zones; common throughout BC; var. *amplexifolius* – circumboreal, N to AK, YT and NT, E to NF and S to NC, TN, MN, SD, NM, AZ and CA; Greenland, Eurasia; var. *chalazatus* – amphiberian, N to AK, E to AB and S to SD, NM, UT, ID and OR; E Asia.

DESCRIPTION:

General: Perennial herb from a thick, short rhizome covered with fibrous roots; stems erect, 40-120 cm tall, branched, sometimes bent at nodes (zigzag), smooth throughout or coarse-hairy on the lower third.

Leaves: Stem leaves several, egg-shaped to broadly lanceolate, 5-15 cm long, 2-6 cm wide, unstalked, tapering to a clasping base, glaucous beneath, the margins entire or minutely toothed; basal leaves lacking.

Flowers: Inflorescence of 1 or sometimes 2, stalked flowers drooping from leaf axils, the stalks 2-5 cm long, jointed and abruptly bent or kinked, smooth; flowers greenish-white to yellowish-green, bell-shaped, of 6 similar, distinct tepals, the tepals 8-14 mm long, oblong-lanceolate, concavely tapering to long, pointed, spreading or bent-back tips; stamens 6; pistil 1, 3-chambered.

Fruits: Berries, egg-shaped to cylindric-ellipsoid, yellow to red, often becoming dark purple, 10-18 mm long; seeds several to many.

Notes: Two varieties occur in BC:

1. Stems coarsely hairy below the first branches; leaves with tiny, irregularly spaced teeth; plants mostly from west of the Coast-Cascade Mountains var. *amplexifolius*
1. Stems smooth; leaf margins entire; plants mostly from east of the Coast-Cascade Mountains var. *chalazatus* Fassett



Stenanthium occidentale



Streptopus amplexifolius var. *amplexifolius*



Streptopus amplexifolius var. *chalazatus*

***Streptopus lanceolatus* (Ait.) Reveal var. *curvipes* (Vail) Reveal (*S. roseus* Michx. var. *curvipes* [Vail]) Fassett)**
rosy twistedstalk**HABITAT/RANGE:**

Moist to mesic forests, glades, streambanks, meadows and clearings in the lowland and steppe to subalpine zones; frequent throughout BC south of 56° N; N to AK, E to AB and S to OR.

DESCRIPTION:

General: Perennial herb from a slender rhizome; stems erect, 10-45 cm tall, usually unbranched, not conspicuously bent or zigzag, sparsely fringed with hairs at the nodes.

Leaves: Stem leaves several, narrowly egg-shaped to elliptic or lanceolate, 3-10 cm long, 1-4 cm wide, unstalked, tapering to a rounded, non-clasping base, shiny beneath, the margins fringed with short, tooth-like, irregularly spaced hairs; basal leaves lacking.

Flowers: Inflorescence of usually single, stalked flowers nodding from leaf axils, the stalks 0.5-2 cm long, curved but not kinked, sparsely coarse-hairy; flowers usually rose-coloured with whitish tips, sometimes greenish-yellow tinged with purple, bell-shaped, of 6 similar, distinct tepals, the tepals 5-10 mm long, oblong-lanceolate, spreading slightly but not bent back at the tips; stamens 6; pistil 1, 3-chambered.

Fruits: Berries, mostly globe-shaped, red, 5-9 mm wide; seeds several.

***Streptopus streptopoides* (Ledeb.) Frye & Rigg. ssp. *brevipes* (Baker) Calder & Taylor (*Kruhsea streptopoides* [Ledeb.] Kearney)**
small twistedstalk**HABITAT/RANGE:**

Moist forests in the montane and subalpine zones; common on coastal mainland, infrequent elsewhere in BC south of 56° N; amphiberian, N to AK, E to AB and S to ID and WA; E Asia.

DESCRIPTION:

General: Perennial herb from a very slender rhizome; stems spreading to erect, 5-15 (20) cm tall, unbranched, not conspicuously bent or zigzag, fringed with coarse hairs at the nodes.

Leaves: Stem leaves several (3 to 8), broadly lanceolate, 2-5 cm long, 0.5-2 cm wide, unstalked, tapering to a rounded, slightly clasping base, the margins with tiny, closely crowded teeth; basal leaves lacking.

Flowers: Inflorescence of single, stalked flowers nodding or drooping from the axils of the upper 1-5 leaves, the stalks 0.3-1 cm long, curved but not kinked, smooth; flowers greenish-purple to rose-coloured with greenish tips, saucer-shaped, of 6 similar, distinct tepals, the tepals 2-4 mm long, narrowly egg-shaped, spreading, somewhat curved back at the tip; stamens 6; pistil 1, 3-chambered.

Fruits: Berries, globe-shaped, red, 4-6 mm wide; seeds few.

TOFIELDIA

1. Stems leafless or at most with one small bract; flowers greenish-white *T. pusilla*
1. Stems with one or more leaves; flowers purplish *T. coccinea*

***Tofieldia coccinea* Richards.**
northern false asphodel**HABITAT/RANGE:**

Dry to mesic meadows, rocky slopes and tundra in the montane to alpine zones; rare in N BC; circumpolar, N to AK, YT and NT, E to AB and disjunct to ON, PQ and Labr.; Greenland, Eurasia.

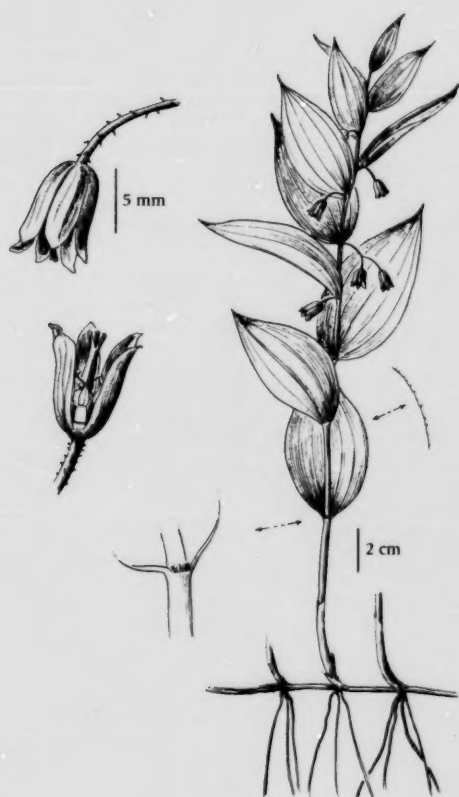
DESCRIPTION:

General: Perennial herb from a short rhizome; flowering stems erect, 4-15 cm tall, smooth, often purplish in the upper part.

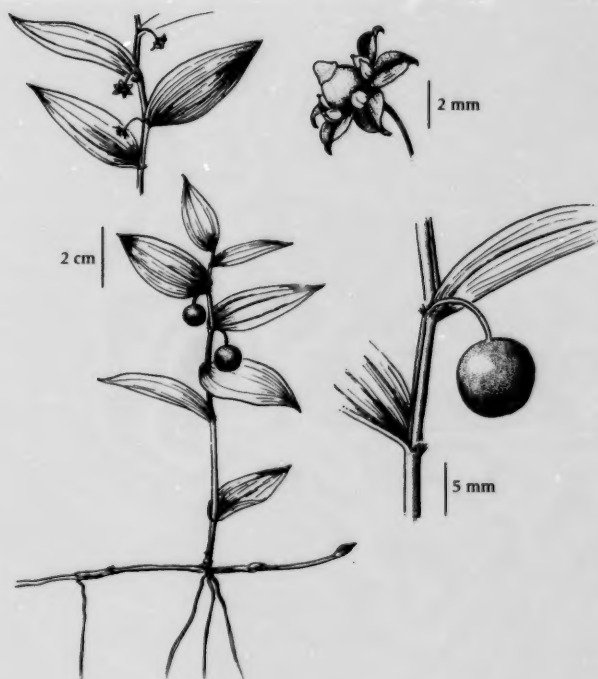
Leaves: Basal leaves several to many, in fan-like tufts, broadly linear, 2-6 cm long, 2-4 mm wide, usually 5-veined, smooth, sheathing at the base, folded in iris-like fashion, the margins entire; stem leaves 1 or sometimes 2 or 3, bract-like and at or above midlength.

Flowers: Inflorescence a dense, head-like, terminal cluster of several to many, short-stalked or unstalked flowers; flowers greenish-white tinged with red or purple, cup-shaped, of 6 similar, distinct tepals, the tepals narrowly egg-shaped, 1.5-3 mm long, spreading; stamens 6, anthers often purple; pistil 1, 3-chambered.

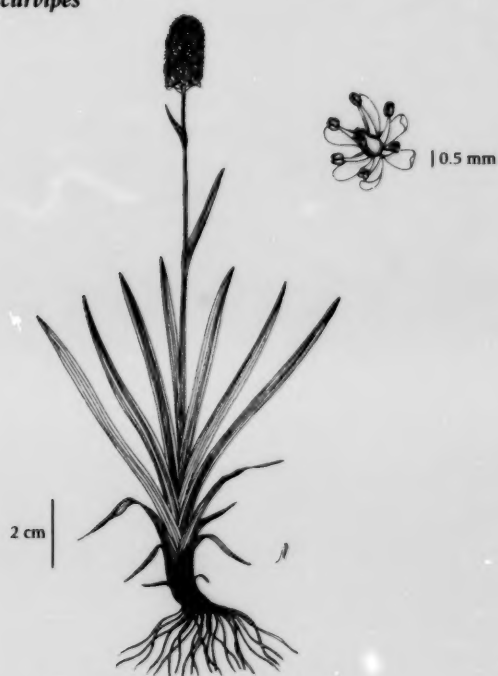
Fruits: Capsules, 3-lobed and 3-beaked, bent down when mature, dark purple, 2-3 mm long; seeds numerous, enclosed in a spongy coat, without appendages.



Streptopus lanceolatus var. *curvipes*



Streptopus streptopoides ssp. *brevipes*



Tofieldia coccinea

Tofieldia pusilla* (Michx.) Pers. (*T. borealis* Wahlenb.)*common false asphodel****HABITAT/RANGE:**

Moist to wet, gravelly flushes, fens, marshy meadows, thickets, turfy shorelines and streambanks in the montane to alpine zones; infrequent in E and N BC, rare in SC BC (Bridge River); circumpolar, N to AK, YT and NT, E to NF and S to ND, MI and MN; Greenland, Eurasia.

DESCRIPTION:

General: Perennial herb from a short rhizome; flowering stems erect, 5-20 (25) cm tall, very slender, smooth.

Leaves: Basal leaves several to many, in fan-like tufts, linear, 2-9 cm long, 1-4 mm wide, usually 3-veined, smooth, sheathing at the base, folded in iris-like fashion, the margins entire; stem leaves lacking or occasionally 1, bract-like and near the base.

Flowers: Inflorescence a compact, head- to spike-like, 0.5- to 3-cm long, terminal cluster of several to many short-stalked flowers, the stalks with bracts at the base; flowers greenish-white, cup-shaped, of 6 similar, distinct tepals, the tepals narrowly oblong, 1.5-3 mm long, spreading; stamens 6; pistil 1, 3-chambered.

Fruits: Capsules, 3-lobed and 3-beaked, erect, greenish to straw-coloured, 2-3 mm long; seeds numerous, enclosed in spongy coats, without appendages.

TRIANTHA

1. Seeds with tight-fitting brownish coats and long, curved, tail-like appendages at one or both ends; flowers mostly 2.5-4 mm long; hairs of flowering stem 1-2 (3) times as long as wide *T. glutinosa*
1. Seeds with loose, spongy, whitish coats and short appendages at one end; flowers 3-6 mm long; hairs of flowering stem sometimes 2-4 times as long as wide *T. occidentalis*

Triantha glutinosa* (Michx.) Baker (*Tofieldia glutinosa* [Michx.] Pers. var. *glutinosa*)*sticky false asphodel****HABITAT/RANGE:**

Wet meadows, bogs, fens and streambanks in the lowland to alpine zones; common in N and E BC, and on Queen Charlotte Islands and northern Vancouver Island; N to NT, E to NF and S to NH, NC, MN, ND and OR.

DESCRIPTION:

General: Perennial herb from a short, strong rhizome; flowering stems erect, 10-50 cm tall, often smooth below, glandular-short-hairy above especially below the inflorescence.

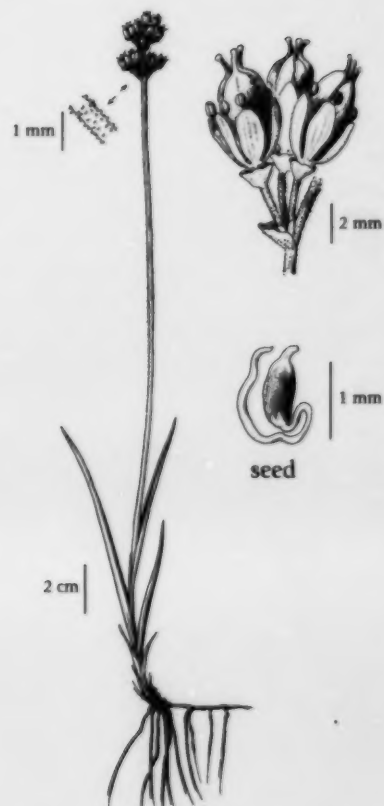
Leaves: Basal leaves several, tufted, broadly linear, 5-20 cm long, 2-4 mm wide, smooth, sheathing at the base, folded in iris-like fashion, the margins entire; stem leaves reduced or lacking, often 1, sometimes 2 or 3, near or below midlength.

Flowers: Inflorescence a compact, spike-like, 2- to 6-cm long, terminal cluster of several to many, stalked flowers in bunches of 2 or 3 at each node of the inflorescence, the stalks 1-7 mm long, sticky-glandular, ascending to erect, with bracts at the tips; flowers white to yellow-green, cup-shaped, of 6 similar, distinct tepals, the tepals narrowly egg-shaped, 2.5-4 mm long, the inner 3 somewhat narrower and longer than the outer 3; stamens 6, the anthers often purplish and conspicuous; pistil 1, 3-chambered.

Fruits: Capsules, 3-lobed and 3-beaked, erect, red or yellowish, 4-7 mm long; seeds numerous, about 1 mm long, ellipsoid, brownish, enclosed in tight-fitting spongy coats, with twisted tail-like appendages at one or both ends.



Tofieldia pusilla



Triantha glutinosa

Triantha occidentalis (S. Wats.) Gates (*T. glutinosa* [Michx.] Persoon ssp. *brevistyla* Hitchc. = ssp. *brevistyla*; *T. glutinosa* ssp. *montana* Hitchc. = ssp. *montana*)
western false asphodel

HABITAT/RANGE:

Wet meadows, bogs, fens and streambanks in the lowland to alpine zones; common in coastal (rare on Queen Charlotte Islands) and SE BC; ssp. *brevistyla* – N to AK and YT, E to AB and S to ID and OR; ssp. *montana* – E to AB and S to WY and ID.

DESCRIPTION:

General: Perennial herb from a short, strong rhizome; flowering stems erect, 10-50 cm tall, often smooth below, smooth or glandular-hairy above especially below the inflorescence, the hairs long and cylindric.

Leaves: Basal leaves several, tufted, broadly linear, 5-20 cm long, 2-4 mm wide, smooth, sheathing at the base, folded in iris-like fashion, the margins entire; stem leaves reduced or lacking, often 1, sometimes 2 to 3, near or below midlength.

Flowers: Inflorescence a compact, spike-like, 2- to 6-cm long, terminal cluster of several to many, stalked flowers in bunches of 2 or 3 at each node of the inflorescence, the stalks 1-7 mm long, sticky-glandular hairy, ascending to erect, with bracts at the tips; flowers white to yellow-green, cup-shaped, of 6 similar, distinct tepals, the tepals oblong-egg-shaped, 3-6 mm long, the inner 3 somewhat narrower and longer than the outer 3; stamens 6, the anthers often purplish and conspicuous; pistil 1, 3-chambered.

Fruits: Capsules, 3-lobed and 3-beaked, erect, red or yellowish, 5-9 mm long; seeds numerous, about 1 mm long, enclosed in loose, whitish, spongy coats, with short appendages at one end.

Notes: Two subspecies occur in BC¹¹:

1. Hairs of the upper stems and inflorescence relatively slender, 3 to 4 times as long as thick, nearly uniform in diameter and smooth ssp. *montana* (Hitchc.) Packer
1. Hairs of the upper stems and inflorescence relatively thick, 2 (3) times as long as thick, tapered and somewhat pimpled ssp. *brevistyla* (Hitchc.) Packer

TRILLIUM

Trillium ovatum Pursh (*T. ovatum* forma *hibbersonii* Taylor & Szczawinski = var. *hibbersonii*)

western trillium; white trillium

HABITAT/RANGE:

Moist forests in the lowland, steppe and montane zones (var. *ovatum*), and mossy bluff ledges and river boulders in the lowland zone (var. *hibbersonii*); common in S BC, south of 50° N; E to SW AB and S to CO and CA.

DESCRIPTION:

General: Perennial herb from a short, stout, fleshy rhizome; flowering stems erect, 10-45 cm tall, unbranched, smooth throughout.

Leaves: Stem leaves usually 3 in a whorl, 5-18 cm long, often as wide, broadly egg-diamond-shaped to triangular egg-shaped, smooth, unstalked or nearly so, the margins entire; basal leaves lacking.

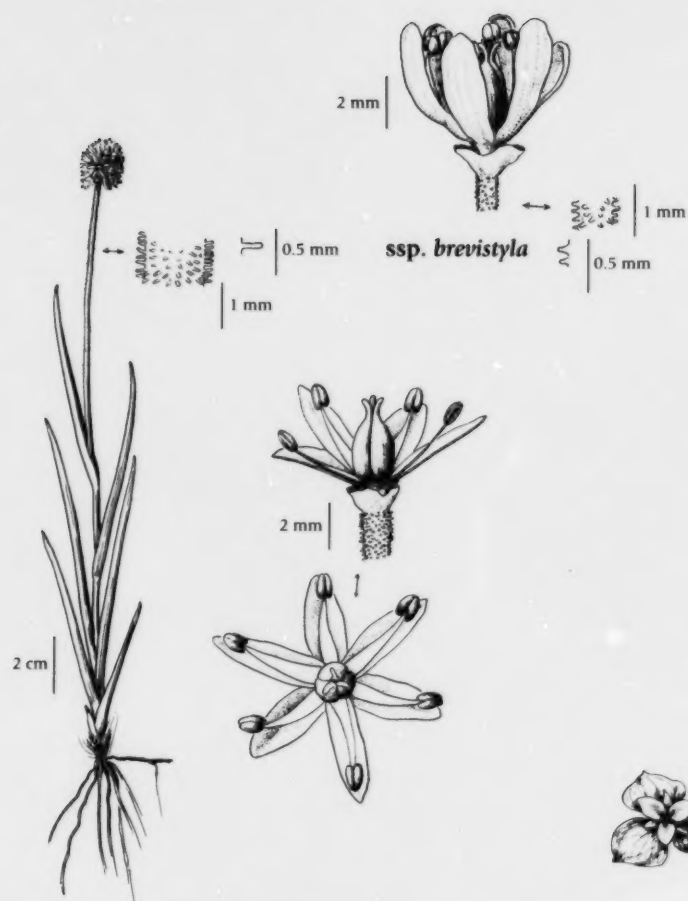
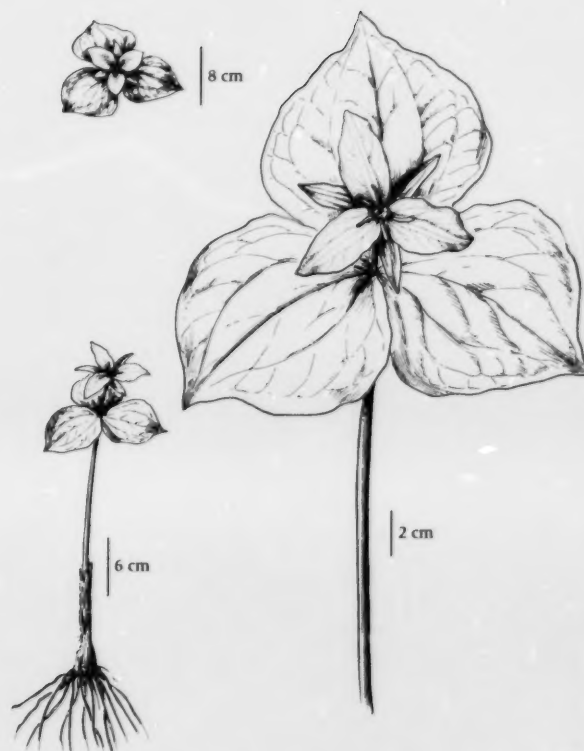
Flowers: Inflorescence a solitary, terminal, stalked flower, the stalk 1-8 cm long; flowers star-shaped, erect to nodding; petals 3, white turning pale pink to purple with age, sometimes pinkish initially, egg-shaped, 3-6 cm long; sepals 3, green and leaf-like, lanceolate to oblong, somewhat shorter than petals; stamens 6; pistil 1, 3-chambered.

Fruits: Capsules, berry-like, green to yellowish, broadly egg-shaped, with wing-like ridges; seeds numerous, large, egg-shaped, in a sticky mass when first shed.

Notes: Two varieties occur in BC:

1. Plants 20-45 cm tall; flowers opening white; the common variety var. *ovatum*
1. Plants 10-20 cm tall; flowers opening pink; rare on western Vancouver Island var. *hibbersonii* (Taylor & Szczawinski) Douglas & Pojar

¹¹ Key from Hitchcock *et al.* (1969).

*Triantha occidentalis* ssp. *montana**Trillium ovatum* var. *ovatum*

TRITELEIA

1. Flowers white, shallowly bell-shaped to saucer-shaped; tepals (petal-like segments) not concealing the ovaries *T. hyacinthina*
1. Flowers pale to dark blue, top- to vase-shaped; tepals concealing the ovaries.
 2. Filaments not flat, narrower than anthers, attached to the perianth tubes alternately at 2 different levels *T. grandiflora*
 2. Filaments flat, broader than anthers, unequal in length but attached to the perianth tubes at the same level *T. howellii*

Triteleia grandiflora Lindl. (*Brodiaea douglasii* [Lindl.] S. Wats.)

large-flowered triteleia

HABITAT/RANGE:

Dry to mesic slopes in the steppe and lowland zones; frequent in SC and SE BC, formerly known from S Vancouver Island, but probably extirpated there; S to WY, UT, ID and OR.

DESCRIPTION:

General: Perennial herb from a deep, straw-coloured, fibrous-scaly, nearly globe-shaped, bulb-like corm; flowering stems erect, 20-70 cm tall, slender, smooth.

Leaves: Basal leaves 1 to 3, linear, keeled, 20-50 cm long, 3-10 mm wide, smooth, sheathing at the base, the margins entire; stem leaves lacking.

Flowers: Inflorescence a compact to open, terminal umbel of 5 to 20, erect to ascending, more or less equally stalked flowers, above several membranous bracts, the stalks 0.5-4 cm long; flowers light- to deep blue to whitish, vase-shaped to narrowly bell- or top-shaped, of 6 fused segments, 1.5-2.5 cm long; corolla lobes in two petal-like whorls, nearly equalling to longer than the tubes, spreading, the outer 3 narrowly egg-shaped to lanceolate, the inner 3 wider, ruffled; stamens 6; pistil 1, 3-chambered.

Fruits: Capsules, egg-shaped, stalked; seeds rounded, black.

Triteleia howellii (S. Wats.) Greene (*Brodiaea howellii* S. Wats., *Triteleia grandiflora* Lindl. var. *howellii* [S. Wats.] Hoover)

Howell's triteleia

HABITAT/RANGE:

Dry to mesic grassy coastal bluffs and meadows in the lowland zone; rare on SE Vancouver Island, the Gulf Islands, and the adjacent mainland; S to CA.

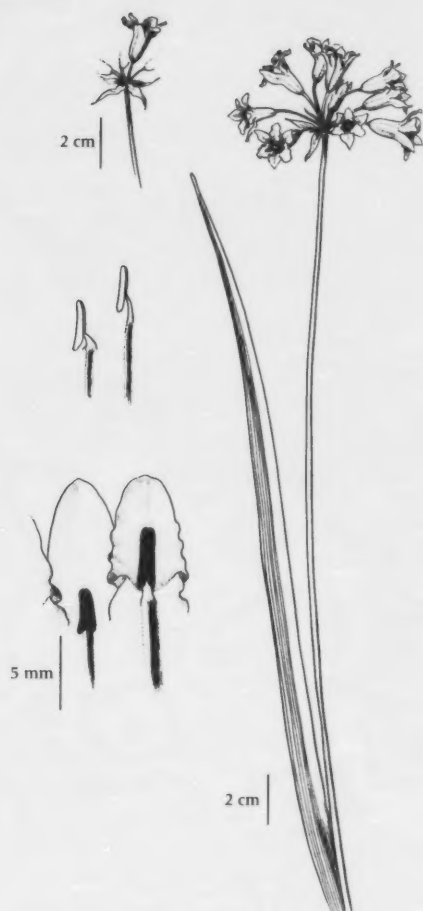
DESCRIPTION:

General: Perennial herb from a deep, straw-coloured, fibrous-scaly, nearly globe-shaped, bulb-like corm; flowering stems erect, 20-50 cm tall, slender, smooth.

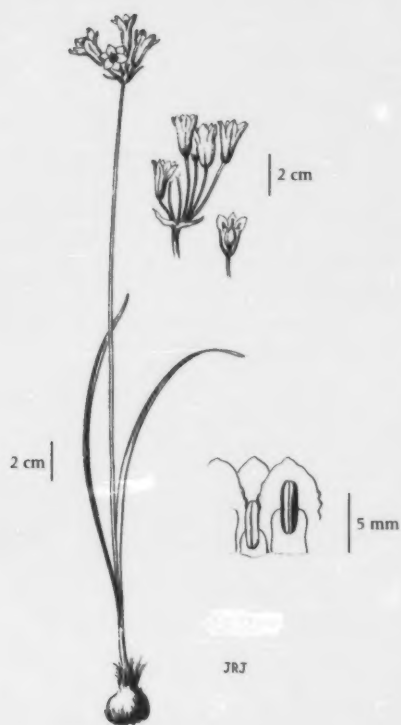
Leaves: Basal leaves 1 or 2, linear, keeled, 10-40 cm long, 3-8 mm wide, smooth, sheathing at the base, the margins entire; stem leaves lacking.

Flowers: Inflorescence a compact, terminal umbel of several erect to ascending, more or less equally stalked flowers, above several membranous bracts, the stalks 0.5-3 cm long; flowers whitish to blue, vase-shaped to narrowly bell-shaped, of 6 fused segments, 1.5-2 cm long; corolla lobes in 2 petal-like whorls, about as long as the tubes, spreading, the outer 3 broadly lanceolate, the inner 3 oblong-egg-shaped, slightly ruffled; stamens 6, the filaments flattened; pistil 1, 3-chambered.

Fruits: Capsules, egg-shaped, stalked; seeds rounded, black.



Triteleia grandiflora



Triteleia howellii

***Triteleia hyacinthina* (Lindl.) Greene (*Brodiaea hyacinthina* [Lindl.] Baker)**
white triteleia

HABITAT/RANGE:

Dry to mesic grassy coastal bluffs, rocky slopes and meadows in the lowland zone; frequent on S Vancouver Island, the Gulf Islands and the adjacent mainland; S to ID, NV and CA.

DESCRIPTION:

General: Perennial herb from a deep, straw-coloured, fibrous-scaly, nearly globe-shaped, bulb-like corm; flowering stems erect, 30-60 cm tall, slender, smooth or somewhat roughened.

Leaves: Basal leaves 1 or 2, linear, keeled, 20-40 cm long, 3-10 mm wide, smooth, sheathing at the base, the margins entire; stem leaves lacking.

Flowers: Inflorescence a compact, terminal umbel of several to many, erect to ascending, more or less equally stalked flowers, above several membranous bracts, the stalks 1-4 cm long; flowers white often tinged with blue, to light blue, with green mid-veins, broadly bell-shaped to bowl-shaped, of 6 fused segments, 1-1.5 cm long; corolla lobes in 2 petal-like whorls, much longer than the tube, spreading, the 2 series much alike, broadly lanceolate to oblong-egg-shaped; stamens 6, attached to the petal-like tube at the same level and about the same length, the filaments flattened and joined toward the base; pistil 1, 3-chambered.

Fruits: Capsules, egg-shaped, stalked; seeds rounded, black.

VERATRUM

***Veratrum viride* W. Ait. (*V. viride* ssp. *eschscholtzii* [A. Gray] Löve & Löve, *V. eschscholtzii* A. Gray)**

Indian hellebore; green false hellebore; corn lily

HABITAT/RANGE:

Moist to wet meadows, streambanks, swamps, thickets and open forests from the lowland to alpine zones; common throughout all but NE BC, especially southward; N to AK, YT and NT, E to AB and S to WY, ID and CA, also disjunct in PQ, Labr, NB and NS and the E U.S. (ME and NY south to GA and AL).

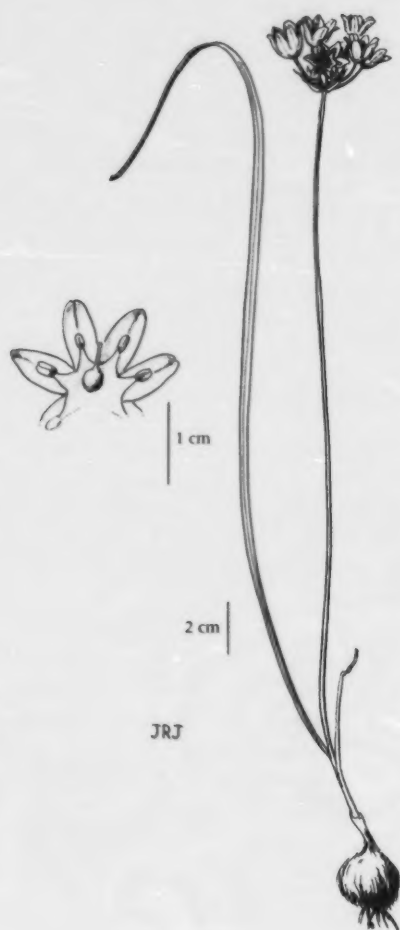
DESCRIPTION:

General: Perennial herb from a short, stout rhizome; flowering stems robust, erect, 0.7-2 m tall, often clustered, unbranched, leafy and short-hairy to woolly throughout or smooth in lower half.

Leaves: Stem leaves numerous, broadly egg-shaped to oblong-elliptic, 10-35 cm long, 5-15 cm wide, becoming smaller and narrower towards the inflorescence, prominently ribbed (accordion-pleated), smooth above, densely hairy beneath, unstalked or nearly so, clasping at the base, the margins entire; basal leaves lacking.

Flowers: Inflorescence a branched terminal cluster, the branches elongate, narrow, densely hairy, and at least the lower drooping, of numerous, stalked flowers, the stalks 2-3 (5) mm long, turning up as the flowers open; flowers pale green or yellow-green, with dark green centres, star-shaped, of 6 similar, distinct tepals, the tepals narrowly lanceolate to oblong-elliptic, 6-13 mm long, somewhat woolly-hairy on the outside, the margins minutely toothed to fringed; stamens 6; pistil 1, 3-chambered.

Fruits: Capsules, barrel-shaped, 3-lobed, erect, 1.5-3 cm long, mostly smooth; seeds numerous, flat, broadly winged, 8-10 mm long.



Triteleia hyacinthina



Veratrum viride

XEROPHYLLUM

Xerophyllum tenax (Pursh) Nutt.

bear-grass

HABITAT/RANGE:

Dry to mesic coniferous forests, glades, meadows and clearings in the montane and subalpine zones; locally common in SE BC; E to AB and S to WY, ID and CA.

DESCRIPTION:

General: Perennial herb from a short, stout, somewhat woody rhizome; flowering stems erect, robust, 0.5-1.5 m tall.

Leaves: Basal leaves numerous in large clumps, rigid, wiry, narrowly linear (grass-like), 20-90 cm long, 1.5-6 mm wide, harshly rough-margined with tiny teeth; stem leaves several to many, reduced upward and eventually bract-like.

Flowers: Inflorescence a dense, pyramidal, terminal cluster, at first bulbous and nipped, later elongating, 10-40 cm long, of numerous, stalked flowers, the stalks slender, 2-5 cm long; flowers white to cream, saucer-shaped, of 6 similar, distinct tepals, the tepals oblong, 5-10 mm long; stamens 6; pistil 1, 3-chambered.

Fruits: Capsules, broadly egg-shaped, 3-lobed, 5-7 mm long; seeds oblong, 2 to 5 in each chamber, 3-4 mm long.

ZIGADENUS

1. Tepals (petal-like segments) 7-11 mm long; ovaries partly inferior; floral glands distinctly 2-lobed *Z. elegans*
1. Tepals less than 7 mm long; ovaries superior; floral glands less distinctive and unlobed *Z. venenosus*

Zigadenus elegans Pursh ssp. *elegans*

mountain death-camas; elegant death-camas

HABITAT/RANGE:

Moist to dry meadows, rocky or grassy slopes, tundra and open forests (often on calcium-rich sites) in the steppe to alpine zones; frequent in E and N BC, rare in SC BC; N to AK, E to SK and S to IA, TX, NM, AZ, NV and OR.

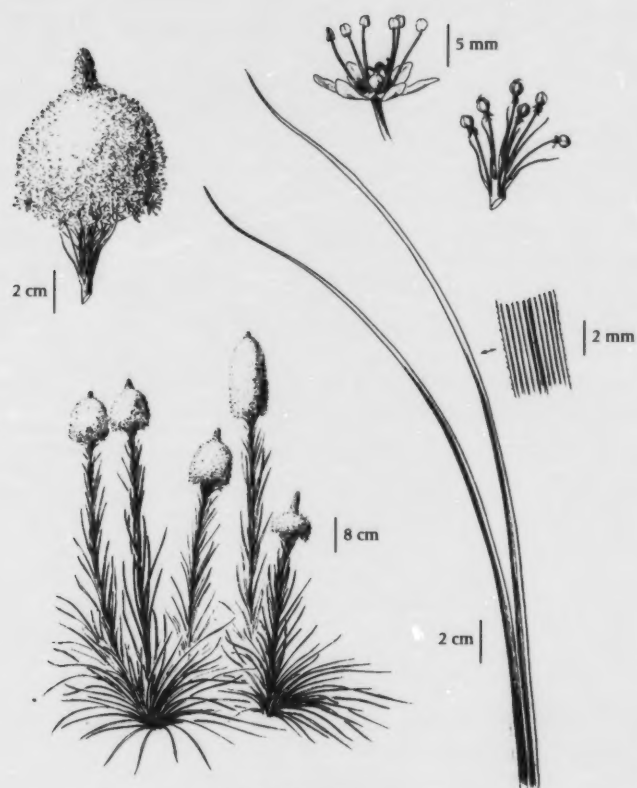
DESCRIPTION:

General: Perennial herb from a deep, scaly, narrowly egg-shaped bulb 2-3 cm long; flowering stems 20-80 cm tall, smooth.

Leaves: Basal leaves several, linear-lanceolate and grass-like, 8-30 cm long, 3-15 mm wide, smooth, glaucous, somewhat keeled, the margins entire; stem leaves few, reduced upward becoming bract-like.

Flowers: Inflorescence an open, terminal cluster of few to several, stalked flowers, the stalks 1-5 cm long, ascending; flowers greenish-white to yellowish-white, bowl- to saucer-shaped, of 6 distinct tepals, the tepals narrowly egg-shaped, 7-11 mm long, each with a large, dark green, deeply notched gland near the base just above the short claws; stamens 6; pistil 1, 3-chambered.

Fruits: Capsules, narrowly egg-shaped, 3-lobed, 1.5-2 cm long; seeds numerous, straw-coloured, 5-6 mm long.



Xerophyllum tenax



Zigadenus elegans ssp. *elegans*

***Zigadenus venenosus* S. Wats. (*Z. gramineus* Rydb. = var. *gramineus*)**

meadow death-camas; grass-leaved death-camas

HABITAT/RANGE:

Dry to mesic grassy or rocky slopes, meadows, forest edges and open forests in the lowland to subalpine zones; common in S BC south of 52° N (var. *venenosus* – predominantly along the coast, var. *gramineus* – more common in the interior); var. *gramineus* – E to SW SK and S to NE, NM, UT, ID and OR; var. *venenosus* – E to AB and S to UT, NV, CA and N Baja CA.

DESCRIPTION:

General: Perennial herb from a deep, scaly, egg-shaped bulb 3-5 cm long; flowering stems 20-70 cm tall, smooth.

Leaves: Basal leaves several, linear and grass-like, 10-40 cm long, 2-6 (10) mm wide, smooth, keeled, finely rough-margined; stem leaves 2 to 4, reduced upward becoming bract-like.

Flowers: Inflorescence a fairly compact to elongate, terminal cluster of several to many, stalked flowers, the stalks 0.5-3 cm long, ascending to erect; flowers creamy-white, bell- to saucer-shaped, of 6 distinct tepals, the tepals narrowly egg-shaped, 4-5 mm long, the inner 3 slightly longer than the outer 3, each with a yellowish-green, somewhat indistinct gland near the base just above the claw; stamens 6; pistil 1, 3-chambered.

Fruits: Capsules, oblong-elliptic, 3-lobed, 0.8-1.5 cm long; seeds numerous, brown, 5-6 mm long.

Notes: Two varieties occur in BC:

1. Upper stem leaves with papery sheaths; 3 outer tepals unstalked or short-clawed, only the inner 3 long-clawed var. *gramineus* (Rydb.) Walsh ex M.E. Peck
1. Upper stem leaves without sheaths; all 6 tepals equally clawed var. *venenosus*

NAJADACEAE

***Najas flexilis* (Willd.) Rostk. & Schmidt**

wavy water nymph

HABITAT/RANGE:

Ponds and marshes in the lowland, steppe and montane zones; frequent in S BC south of 53° N, rare northward in E BC to 55° N, rare on the Queen Charlotte Islands, E to NF and S to MA, CT, VA, KY, MO, NE, AZ and CA.

DESCRIPTION:

General: Perennial aquatic herb from a fibrous root; stems much branched, submersed, 30-150 cm long, about 1 mm thick.

Leaves: Basal leaves lacking; stem leaves linear, 1-3 cm long, about 0.5 mm wide, in nearly opposite pairs, the base expanded for 3-5 mm and more or less sheathing, the margins minutely toothed, tapering continuously to the slender tips.

Flowers: Inflorescence solitary or a pair of unstalked or nearly unstalked, axillary, unisexual flowers; perianth parts lacking; male flowers with 1-chambered anthers.

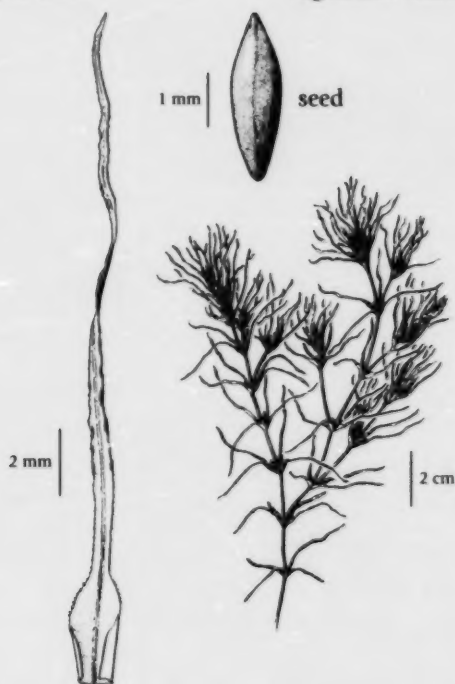
Fruits: Achenes, spindle-shaped, about 3 mm long, smooth.



Zigadenus venenosus var. *gramineus*



Zigadenus venenosus var. *venenosus*



Najas flexilis



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APPENDIX 1 – EXCLUDED SPECIES

CYPERACEAE

- Carex alma* Bailey. Reported by Henry (1915) but probably based on a misidentification since the species occurs only in the SW U.S.
- Carex barbarae* Dewey. Cited in Henry (1915) but all material probably referable to *C. sitchensis* (Scoggan 1978).
- Carex communis* Bailey. This species of the E U.S. was cited by Henry (1915) but is likely based on a misidentification.
- Carex eleusinoides* Turcz. Cited for BC by Scoggan (1978). This species is related to the *C. lenticularis* complex and occurs only in AK, YT and NT (Welsh 1974, Cody 1996).
- Carex hookeriana* Dewey. Reported by Henry (1915) but not likely to occur in BC (Taylor 1983).
- Carex hormathodes* Fern. The citation of this species by Henry (1915) is almost certainly in error since it does not occur west of PQ (Scoggan 1978).
- Carex mackenziei* Krecz. Taylor and MacBryde (1977) reported this species from BC but no voucher specimens are available.
- Carex merritt-fernaldii* Mack. This species was first reported for BC by Fernald (1950) then taken up by Scoggan (1978). Since the range of this taxon is from MB to NF (Taylor 1983) it is not likely to occur in BC.
- Carex nebrascensis* Dewey. Reported by Henry (1915) and Taylor and MacBryde (1977) but specimens reidentified as other species (Boivin 1979).
- Carex prinophylla* Holm. (*C. scopulorum* Holm var. *prinophylla* [Holm] Standley). This species was listed by Taylor and MacBryde (1977) but to date all of our material has been identified as *C. scopulorum* var. *bracteosa*.
- Carex projecta* Mack. Cited by Eastham (1947) but no material found. The report is likely in error since the species ranges from MB to NF (Scoggan 1978).
- Carex proposita* Mack. Taylor and MacBryde (1977) reported this species from BC but no voucher specimens are available.
- Carex scopulorum* Holm var. *scopulorum*. This variety, which ranges from WY south to NM (Kartesz and Meacham 1999), was reported by Taylor and MacBryde (1977) but no voucher specimens are available.
- Carex subfusca* Boott. The report by Eastham (1947) was based on a 1941 collection by Eastham identified by F. Hermann. There have been no other collections of this species in BC.
- Carex tincta* Fern. This species of E Canada and E U.S. was reported by Scoggan (1978) but is likely based on a misinterpretation of a collection of *C. bebbii* or a hybrid of the latter (Boivin 1979).
- Eleocharis ovata* (Roth) Roem. & Schult. All BC material of this species has been reidentified as *E. obtusa*.
- Scirpus pungens* (Vahl) Palla ssp. *monophyllus* (J. & K. Presl) Taylor & Macbryde (*Scoenoplectus pungens* var. *badius* [J. & K. Presl] S. G. Smith). This variety was reported by Taylor and MacBryde (1977) but all of our material appears to belong to *S. pungens* var. *longispicatus*.

HYDROCHARITACEAE

- Vallisneria spiralis* L. This species, cited by Taylor and MacBryde, apparently is absent from BC (Brayshaw 1985) and Canada (Scoggan 1978). Our material is referable to *V. americana*.

IRIDACEAE

- Iris setosa* Pall. ex Link. Cited in Taylor and MacBryde (1977) and Straley *et al.* (1985), but all specimens referred to as this species are *Iris missouriensis*. However, it may yet be found in NW BC.

JUNCACEAE

Juncus marginatus Rostk. Reported for BC by Swab (1993), but no specimens seen.

Juncus orthophyllus Coville. Cited by Scoggan (1978), this species was based on mis-identified specimens.

Luzula multiflora (Retz.) Lej. var. *kjellmanioides* Taylor & MacBryde. This variety was based on material from Kamchatka (Taylor and MacBryde, 1978) and probably does not occur in North America.

LEMNACEAE

Lemna gibba L. Reported by Taylor and MacBryde (1977) but no material seen.

LILIACEAE

Narcissus jonquilla L. Cited in Taylor and MacBryde (1977) but no specimens seen. A garden ornamental, not known to persist.

Nothoscordum bivalve (L.) Britt. Cited in Taylor and MacBryde (1977) based on 1921 record from Victoria. No recent collections known.

Scilla nonscripta (L.) Hoffmanns. & Link. A rare garden escape, known only from Beacon Hill Park, Victoria, BC.

Smilacina racemosa (L.) Desf. var. *racemosa*. The eastern North American variety cited in Taylor and MacBryde (1977) is not expected in BC.

APPENDIX II – NAME CHANGES

The following are name changes that have been made since Douglas *et al.* (1994).

- Alisma plantago-aquatica* = *A. triviale*
- Camassia leichtlinii* = *C. leichtlinii* ssp. *suksdorfii*
- Carex ablata* = *C. luzulina* var. *ablata*
- Carex canescens* ssp. *arctaeformis* = *C. arctiformis*
- Carex eleocharis* = *C. duriuscula*
- Carex enanderi* = *C. lenticularis* var. *dolia*
- Carex foenea* = *C. siccata*
- Carex franklinii* = *C. petricosa*
- Carex hindsii* = *C. lenticularis* var. *limnophila*
- Carex kelloggii* = *C. lenticularis* var. *lipocarpa*
- Carex livida* = *C. livida* var. *radiculis*
- Carex maritima* = *C. incurviformis* var. *incurviformis*
- Carex rugosperma* var. *tonsa* = *C. tosa* var. *tonsa*
- Cyperus aristatus* = *C. squarrosus*
- Disporum hookeri* var. *oreganum* = *Prosartes hookeri* var. *oregana*
- Disporum smithii* = *Prosartes smithii*
- Disporum trachycarpum* = *Prosartes trachycarpa*
- Eriophorum vaginatum* ssp. *spissum* = *E. vaginatum* ssp. *vaginatum*
- Hemicarpha micrantha* = *Lipocarpa micrantha*
- Luzula arctica* = *L. nivalis*
- Luzula arcuata* = *L. arcuata* ssp. *unalaschensis*
- Luzula multiflora* ssp. *comosa* = *L. comosa*
- Luzula multiflora* ssp. *kjellmaniana* = *L. kjellmaniana*
- Luzula parviflora* ssp. *fastigiata* = *L. fastigiata*
- Luzula parviflora* ssp. *melanocarpa* = *L. parviflora*
- Maianthemum canadense* var. *interius* = *M. canadense*
- Scirpus acutus* = *Schoenoplectus acutus*
- Scirpus americanus* = *Schoenoplectus pungens* var. *longispicatus*
- Scirpus olneyi* = *Schoenoplectus americanus*
- Scirpus cernuus* = *Isolepis cernua*
- Scirpus cyperinus* var. *brachypodus* = *S. atrocinctus*
- Scirpus fluviatilis* = *Bolboschoenus fluviatilis*
- Scirpus maritimus* var. *paludosus* = *Bolboschoenus maritimus* var. *paludosus*
- Scirpus nevadensis* = *Amphiscirpus nevadensis*
- Scirpus setaceus* = *Isolepis setacea*
- Scirpus subterminalis* = *Schoenoplectus subterminalis*
- Scirpus supinus* var. *saximontanus* = *Schoenoplectus saximontanus*
- Scirpus validus* = *Schoenoplectus tabernaemontani*
- Smilacina racemosa* var. *amplexicaulis* = *Maianthemum racemosum* ssp. *amplexicaule*
- Smilacina stellata* = *Maianthemum stellatum*
- Smilacina trifolia* = *Maianthemum trifolium*
- Streptopus amplexifolius* var. *americanus* = *S. amplexifolius* var. *amplexifolius*
- Streptopus roseus* var. *curvipes* = *S. lanceolatus* var. *curvipes*
- Tofieldia glutinosa* = *Triantha glutinosa*
- Triglochin concinnum* var. *concinnum* = *T. concinna*
- Triglochin maritimum* = *T. maritima*
- Triglochin palustre* = *T. palustris*
- Veratrum viride* ssp. *eschscholtzii* = *V. viride*

GLOSSARY¹²

- Abaxial** — On the side of a structure turned away from the main axis.
- Acerose** — With a needle-like tip, "needle-pointed".
- Achene** — A dry, single-seeded fruit that does not open at maturity.
- Acicular** — Shaped like the needle of a pine tree, "needle-like".
- Acorn** — The fruit of the oak (*Quercus*); composed of a nut and its cup or cupule.
- Acuminate** — Tapering to a narrow tip or concave point, the sides generally concavely narrowing, "long-pointed".
- Acute** — Tapering to a point, the sides straight (i.e., not convex or concave), "sharp-pointed".
- Adaxial** — On the side of a structure, turned toward the main axis.
- Adnate** — Fusion or attachment of unlike parts (e.g., the calyx and corolla).
- Adventitious** — Development of structures in unusual locations; in the case of roots, generally refers to the development of roots from the stem or leaf.
- Alternate** — Any arrangement of leaves or other parts not opposite or whorled; arranged singly at different heights on the stem.
- Ament** — A pendulous spikelike inflorescence with apetalous, unisexual flowers; a catkin.
- Amphiberingian** — Occurring on both sides of the Bering Strait; a phytogeographic element resulting from past migration across the Bering Land Bridge.
- Amplexicaul** — Clasping the stem.
- Androecium** — A collective term referring to male floral parts, that is, the stamens.
- Androgynous** — A spike bearing staminate (male) and pistillate (female) flowers where the staminate flowers are positioned above the pistillate flowers, closer to the tips of the inflorescence.
- Annual** — Living for only 1 growing season.
- Anthesis** — The period of time when a flower is fully open, "flowering time".
- Anthocyanic** — Of the character of anthocyanins, water-soluble pigments ranging in colour from blue or violet through purple to crimson.
- Apetalous** — Without petals.
- Apex** — Tip, point or end.
- Aphyllopodic** — Having lower leaves that are bladeless or reduced to scales (e.g., *Carex* spp.).
- Apical** — Located at the tips.
- Apiculate** — "Abruptly sharp-pointed".
- Apomictic** — Capable of reproducing asexually.
- Apomixis** — Any of several types of asexual reproduction.
- Aquatic** — Living in water.
- Arachnoid** — Covered with long, delicate, tangled hairs; resembling a cobweb.
- Arcuate** — Curved.
- Aristate** — Having an awn or a bristle at the tip, "awl-tipped".

¹² Words or phrases used in lieu of technical terms in this manual appear in quotes in the glossary.

- Armed** — Possessing prickles, spines, or thorns.
- Articulate** — Jointed; separating at a joint, by a clean cut scar, upon maturity.
- Aril** — An appendage or outer covering of a seed, growing out from the hilum or funiculus; sometimes it appears as a pulpy covering.
- Anther** — The pollen producing sac of the stamen.
- Aristate** — Tipped with stiff awns or bristles; "stiff-awned or stiff-bristled".
- Attenuate** — Gradually tapering to a slender base or tip, "long-pointed".
- Auct. non** — Indicates that a species name is used commonly in the literature but is incorrect and is not the name used to refer to the type specimen.
- Auricle** — An ear-shaped lobe or appendage.
- Auriculate** — With auricles; often used to describe the base of a leaf blade where there is an auricle on either side of the petiole; with "earlike lobes".
- Awn** — A slender bristlelike appendage, usually at the tips of a structure.
- Axil** — The angle between a structure and the axis to which it is attached (e.g., the angle between a leaf and the stem).
- Axile placentation** — A pattern of placentation where the ovules are attached to the partitions of a compound pistil near the center of the ovary.
- Axillary** — Used in reference to structures attached in the axil or juncture of stem and leaf stalks.
- Banner** — The largest, upper petal of a papilionaceous flower.
- Barb** — A short, firm, reflexed process.
- Barbellate** — Minutely or "finely-barbed"; bearing stiff hairs with barbs.
- Basal** — At, or forming, the base.
- Beak** — A long, slender projection on a broader structure such as a fruit or seed.
- Bi** — A prefix meaning two or twice.
- Bidentate** — "2-cleft".
- Biennial** — Living for two seasons.
- Bifurcate** — "Two-forked".
- Bilabiate** — "Two-lipped"; often with reference to an irregular flower.
- Bipinnate** — See bipinnatifid.
- Bipinnatifid** — Twice divided.
- Biserrate** — Doubly serrated.
- Bisexual** — Bearing both male and female reproductive structures.
- Biternate** — Two groups of three.
- Bloom** — See glaucous.
- Bract** — A modified leaf, reduced in size or form, that is associated with a flower or an inflorescence; in conifers, a main appendage arising from the axis of a cone.
- Bractlet** — A small or secondary bract (*syn.* bracteole).
- Bristle** — A stiff, hairlike structure.
- Bristly** — With bristles.

Bulb — A small, stout underground stem bearing modified (scalelike) leaves and fibrous basal roots; generally food storage organs.

Bulbiferous — Producing bulbs.

Bulbil — A small bulb produced above the ground, often on the flowering stem.

Caducous — Falling off the plant early relative to other similar structures.

Caespitose — Growing in dense, low-lying clumps, "tufted".

Calcareous — Rich in calcium carbonate.

Callose — Bearing callosities.

Callosity — See callus.

Callus — A hard or firm thickening of a structure; in grasses, the thick, hardened basal portion of the lemma.

Calyx — A collective name referring to the sepals, the outer whorl of the perianth.

Campanulate — "Bell-shaped" to saucer-shaped.

Canaliculate — With a channel or a groove, "grooved".

Cane — In *Rubus* spp., woody shoots that arise each year.

Canescent — Appearing white or grey due to very short, fine hairs.

Capillary — Very slender and "hairlike".

Capitate — In a "headlike" cluster.

Capsule — A dry, dehiscent fruit comprised of more than 1 carpel; method of splitting further classifies the capsule type (e.g., circumscissile, septicidal, etc.).

Carinate — "Keeled".

Carpel — The basic unit of a pistil, a modified seed bearing leaf.

Caruncle — An often fleshy appendage at or near the attachment point (hilum) of some seeds.

Caryopsis — The dry, 1-seeded fruit found in grasses.

Catkin — See ament.

Caudate — Bearing a terminal, long and slender appendage like a tail.

Caudex — The woody, thickened and persistent basal portion of a herbaceous perennial that gives rise to leaves and flowering stems each year, i.e. "stem-base".

Caulescent — Having an obvious leafy stem.

Cauline — Of, or pertaining to, the stem, i.e. "stem leaves".

Cellular — A term used in reference to the cell-shaped network of minutely raised and lignified ridges on epidermis (e.g., on the culm of some *Carex* spp.).

Chaffy — With thin dry scales or bracts; "scaly".

Channeled — Folded or with 1 or more deep grooves.

Chartaceous — Having the texture of stiff paper or parchment; "firm-papery", thickly membranous.

Ciliate — Leaves fringed on the margins, with fine hairs (cilia), "fringed".

Ciliolate — Ciliate but with smaller hairs.

Cinereous — Ash-coloured or light grey, sometimes somewhat bluish, usually due to short hairs.

Circumboreal — Distributed at the top or the bottom of the world in the boreal zone.

- Circumpolar** — Distributed around the North or the South Pole.
- Circumscissile** — A capsule that dehisces transversely in a circular line, like the opening of a lid.
- Clavate** — "Club-shaped", the wider portion at the tips.
- Claw** — The narrowed, basal portion of some petals or sepals.
- Cleft** — Usually applied to leaf margins and sinuses cut sharply and about half-way to the midrib or base; deeply lobed.
- Cleistogenes** — Plants which bear cleistogamous flowers.
- Cleistogamous** — Of flowers, small, closed, self-fertilized.
- Collar** — In grasses, the band on the outside area of the leaf at the point where the leaf blade and the sheath converge.
- Coma** — A tuft of hair usually at the tips of structures like seeds.
- Compound** — With 2 or more parts or components.
- Confluent** — Structures merging into 1; fusing at the bases.
- Conic** — Cone-shaped; "conelike".
- Connate** — Union or attachment of like parts (e.g., petals), "fused".
- Connivent** — Convergent but not fused.
- Convolute** — The arrangement of petals or sepals such that each petal or sepal has 1 edge exposed while the other is covered; in grasses, a leaf that is rolled longitudinally so that 1 edge is inside the other.
- Cordate** — Shaped like a heart, with the notch at the base; "heart-shaped".
- Coriaceous** — Having a thick and leathery texture, "leathery".
- Corm** — A thickened, underground stem with papery leaves; a storage organ.
- Corniculate** — Bearing small horns.
- Corolla** — The collective term describing the petals of a flower.
- Corymb** — A flat-topped, indeterminate inflorescence where pedicels of florets are progressively shorter towards the center of the inflorescence; may be simple or compound.
- Corymbose** — A flat or convex-topped inflorescence; resembling a corymb.
- Costa** — A prominent rib or vein.
- Cotyledon** — The first functional leaf of a seedling.
- Crenate** — Toothed with rounded, broad teeth, "round-toothed".
- Crenulate** — Crenate but with smaller teeth.
- Crown** — The persistent basal portion of a perennial plant (e.g., grass), or the leafy portion of a tree; any appendage situated between the corolla and the stamens.
- Cruciform** — Having the shape of a cross, "cross-shaped".
- Cucullate** — Hooded or "hood-shaped".
- Culm** — The flowering stem of grasses, sedges and rushes.
- Cuneate** — Triangular or "wedge-shaped" with the acute angle at attachment point.
- Cupulate** — Cup-shaped; "cuplike".
- Cuspidate** — Bearing a short, rigid and sharp point, usually in reference to the tips of a leaf, "concavely awl-tipped".

- Cyme** — An inflorescence in which all floral axes terminate in a single flower with the terminal flower, at the apex of the inflorescence, blooming first.
- Cymose** — Bearing cymes, or cyme-like.
- Deciduous** — Seasonal shedding of leaves or other structures after the growth period.
- Decumbent** — Lying on the ground with the end curved upward.
- Decurrent** — A structure adnate or confluent to the stem near its insertion point, with an adnate wing or margin extending down the stem or axis below the point of insertion.
- Definite** — Distinct; precise.
- Deflexed** — Bent downward or backward.
- Dehiscent** — Discharge of contents by the opening of pores or slits, most often pertaining to the opening of fruit at maturity.
- Deltoid** — Shaped like an equilateral triangle.
- Dentate** — With sharp, spreading teeth, "sharp-toothed".
- Determinate** — An inflorescence with the terminal or central flower developing first.
- Dichotomous** — Forked with both branches of approximately equal size.
- Didymous** — Occurring or developing in pairs.
- Digitate** — Handlike.
- Dimorphic** — Having 2 forms.
- Dioecious** — Male and female reproductive structures borne on different plants.
- Disarticulate** — The separation of structures at maturity.
- Disciform** — With the form of a disk; in the Asteraceae, with the central flowers of a head perfect (or functionally staminate) and the marginal flowers pistillate but without a ligule.
- Discoid** — Resembling a disk; in the Asteraceae, with the flowers of a head all tubular and perfect (or functionally staminate).
- Disk corolla (disk flower)** — Tubular corolla or flower of some members of the Asteraceae.
- Dissected** — Divided into many small, fine and often repeated parts or segments.
- Distal** — Denoting the region furthest away from the organ's point of attachment.
- Distichous** — With parts on opposite sides of the stem in the same plane, "2-ranked".
- Divaricate** — "Widely spreading".
- Dorsal** — Pertaining to, or located on, the back of an organ.
- Drupe** — A fleshy, 1-seeded or 1-stoned fruit of some plants of the rose family (e.g., cherries, peaches).
- Dystrophic** — A water body turning brown with suspended organic material and having a high carbon to nitrogen ratio of 10:1 or greater.
- Elliptic** — Shaped like an ellipse, the broadest point midway between the ends, and the width about one half the length.
- Emarginate** — Having a shallow notch at the tips, usually with reference to a leaf or petal.
- Endocarp** — The innermost layer of the three layers comprising the mature ovary wall of a fruit.
- Entire** — A continuous margin, without teeth or divisions.
- Epigaeous** — Growing above ground.

- Epiphytic** — A plant that grows on another plant but does not receive nourishment from it.
- Equitant** — With alternate leaves whose basal portions overlap and are flattened lengthwise (e.g., *Iris*).
- Erose** — An irregular margin, appearing eroded or gnawed, not fringed or toothed.
- Ex** — With respect to plant authorities, indicates that the first author proposed the name for a plant and the second author published that name.
- Excurrent** — Extending beyond the margin or tip, as a midrib developing into a mucro or awn; with a continuing central axis from which lateral branches arise.
- Exfoliate** — To peel off in shreds, thin layers or plates, as bark from a tree trunk.
- Exserted** — Projecting beyond a surrounding structure, like stamens projecting beyond a corolla.
- Extravaginal** — Located outside the sheath that surrounds another organ.
- Falcate** — Curved sideways and tapering, "sickle-shaped".
- Farinose** — Covered with a white mealy substance.
- Fascicle** — A cluster.
- Ferruginous** — Rust in colour.
- Fibril** — Short, threadlike hair.
- Filament** — The slender stalk of the stamen that supports the anther.
- Filiform** — "Threadlike", slender and cylindrical.
- Fimbriate** — Fringed with hairs coarser than cilia.
- Fistulose** — Hollow.
- Flabellate** — "Fan-shaped".
- Flabelliform** — *See* flabellate.
- Flexuous** — Bent in opposite directions; having a more-or-less zig-zag or wavy form.
- Floccose** — Covered with tufts of soft woolly hairs that usually rub off readily.
- Floret** — A small flower, particularly 1 in a floral cluster; pertains also to the flower of a grass spikelet which includes the lemma, palea and reproductive structures.
- Foliaceous** — "Leaflike".
- Follicle** — A dry, dehiscent fruit composed of 1 carpel that splits at the side upon maturing to release its seeds.
- Fornix** (*pl.* fornices) — A small, scale like or petaloid appendage in the tube or throat of the corolla.
- Free central placentation** — A pattern of placentation where the ovules are borne on a single stalk, which is anchored at the base of a 1-celled ovary.
- Frond** — The leaf of a fern.
- Fruit** — The ripened ovary and any other structures that enclose it.
- Funnelform** — "Funnel-shaped," usually pertaining to the corolla.
- Fusiform** — "Spindle-shaped," broadest at the middle and tapering to opposite ends.
- Galea** — The hooded portion of the perianth in some irregular or bilabiate flowers.
- Gametophyte** — The sexual reproductive stage of a plant that produces gametes; in ferns it is often the small inconspicuous form of the plant.
- Gamopetalous** — Flowers which are fused to any degree.
- Geminate** — "In pairs".

- Gemma** (*pl. gemmae*) — A young bud which, when detached, forms a new plant vegetatively.
- Geniculate** — Abruptly bent.
- Gibbous** — Swollen on 1 side.
- Glabrate** — "Nearly smooth," or becoming smooth, usually with age.
- Glabrescent** — *See* glabrate.
- Glabrous** — "Smooth," without hairs or glands.
- Gland** — A spot or structure that produces a sticky or greasy substance.
- Glandular** — Having glands.
- Glandular-pubescent** — With gland-tipped hairs, "glandular-tipped".
- Glaucous** — Covered with a whitish or bluish waxy powder that readily rubs off; with a bloom.
- Globose** — Spherical.
- Glochidia** — Retrorsely barbed hairs.
- Glomerate** — Aggregated or condensed into heads.
- Glomerule** — A dense cluster, usually of flowers.
- Glumes** — The 2 small bracts located at the base of a grass spikelet; they do not subtend flowers.
- Glutinous** — Covered with a sticky, glue-like resin.
- Gynaecandrous** — A spike bearing staminate (male) and pistillate (female) flowers where the staminate flowers are positioned below the pistillate flowers, thus the pistillate flowers are closest to the spike tips.
- Hastate** — Shaped like the head of an arrow with the basal lobes flaring outward, "arrowhead-shaped".
- Head** — A dense indeterminate inflorescence of sessile (or nearly sessile) flowers, situated on an axis that is much compressed vertically and sometimes flattened or saucer-shaped.
- Hemispheric** — In reference to a head, with a half-sphere shape.
- Herb** — Plant with stem that dies back to the ground after flowering or at the end of the growing season.
- Herbaceous** — A non-woody plant.
- Heterophyllus** — Having 2 types of leaves.
- Heterosporous** — Production of 2 different types of spores, generally differing in size.
- Hirsute** — Covered with long, stiff and coarse hairs, "stiff-hairy".
- Hirtellous** — Minutely hirsute.
- Hispid** — Bearing long, rigid and very sharp bristles or "bristlelike" hairs.
- Hispidulous** — Slightly hispid.
- Hoary** — Covered with short and fine white or grey hairs.
- Homophyllous** — With leaves that are all identical or very similar in form.
- Homosporous** — Production of one type of spore.
- Hyaline** — Thin, almost completely transparent tissue, wax papery, "translucent".
- Hybrid** — A cross between 2 taxa, usually a cross between 2 species of the same genus.
- Hypanthium** — A cup-like structure surrounding the ovary, formed by the fusion of the basal portions of the perianth, calyx, corolla and androecium.
- Imbricate** — Partly overlapping in a spiral manner, shingle-like, "graduated".

- Imperfect** — Flowers lacking either female or male reproductive structures, a unisexual flower.
- Indeterminate** — An inflorescence with the terminal or central flower developing last.
- Incised** — Cut sharply, deeply and irregularly, as in leaf margins.
- Indehiscent** — remaining closed at maturity.
- Indument** — Appendages or outgrowths from the epidermis of a plant, a collective term, of hairs or scales.
- Indurate** — Hard or stiff.
- Indusium** (*pl. indusia*) — A scale-like outgrowth that covers and protects the cluster of sporangia located on the underside of a fern frond.
- Inferior** (ovary) — When the perianth and androecium are fused at the top of the ovary wall, the ovary position is described as inferior.
- Inflorescence** — The flowering cluster, categorized by the arrangement of flowers on the floral axis.
- Intergradients** — Taxa that interbreed and consequently share many characteristics making it difficult to separate them taxonomically.
- Internode** — The section of a stem or another structure between 2 nodes.
- Interrupted** — Discontinuous, with gaps.
- Involucre** — A rosette of bracts subtending an inflorescence or head.
- Involute** — Margins longitudinally in-rolled, on the upper side, toward the center.
- Irregular** — Pertaining to a flower in which similar parts (e.g., petals) are unequal in shape and size (*syn. zygomorphic*).
- Keel** — In a papilionaceous flower, the 2 lowermost connate petals; resembles the keel of a boat; in grasses, the sharp crease or ridge of the leaf blades, the lemma or the glume.
- Lacerate** — With an irregular or jagged margin, as if torn.
- Laciniate** — Cut into narrow, often pointed, lobes.
- Lamina** — The flattened portion (i.e., the blade) of a leaf or petal.
- Lanate** — Woolly, with long intertwined, curly hairs.
- Lanceolate** — Longer than broad, widening above the base and tapering to the tips.
- Leaflet** — One of the segments or divisions of a compound leaf.
- Lemma** — The 2 outermost bracts that subtend the grass floret (see palea).
- Lenticular** — Biconvex in shape, "lens-shaped".
- Ligulate** — With a ligule.
- Ligule** — Flattened part of the ray corolla in the Asteraceae; in many grasses and some sedges and rushes, a membranous (or hairlike) appendage on the inner side of the leaf at the junction of the leaf blade and the sheath.
- Linear** — Long and narrow, with parallel margins.
- Locule** — A compartment in the ovule or anther.
- Lodicule** — One of 2 or 3 scales appressed to the base of the ovary (Poaceae)
- Lunate** — Crescent-shaped.
- Lustrous** — Shiny.
- Lyrate** — Pinnatifid with the end lobe enlarged and rounded.

- Maculate** — "Spotted".
- Malpighiaceae** — Hairs attached to a surface by their centers.
- Maritime** — Near to, or influenced by, the sea.
- Megasporangia** — The sporangia of a heterosporous plant that produces megaspores.
- Megaspore** — On a heterosporous plant, the larger of 2 spore sizes produced; a spore involved in development of female reproductive organs.
- Membranaceous** — Of parchmentlike texture.
- Mericarp** — One portion of the fruit (e.g., a schizocarp) that splits into 2 halves at maturity, found in members of the Apiaceae and the Haloragaceae.
- Merous** — A suffix referring to the division of floral parts, e.g., a 3-merous flower would have 3 petals, 3 sepals, 3 stamens, and a pistil with 3 carpels.
- Mesic** — Relating to habitats with a moderate or average amount of moisture.
- Microsporangia** — The sporangia of a heterosporous plant that produces microspores.
- Microspores** — On a heterosporous plant, the smaller of 2 spore sizes produced; a spore involved in the development of male reproductive organs.
- Monoecious** — Male and female reproductive structures borne on the same plant.
- Mottled** — Marked with spots.
- Mucro** — A small, short and abrupt point.
- Mucronate** — Having a mucro or abrupt, short projection on the midrib at the leaf tip, "abruptly slender-tipped".
- Muricate** — Roughened with short, firm and sharp projections.
- Naked** — Lacking various organs, hairs or appendages.
- Naturalized** — A well established plant originating from another area.
- Neutral** — In reference to a flower lacking functional stamens and pistils.
- Nodding** — Curving to 1 side; minutely pendulous.
- Node** — The location on a stem where stems or leaves usually originate, generally a swollen area, other structures like tendrils and flowers may also originate here.
- Nodulose** — More or less knobby, diminutive of nodose, especially for describing roots.
- Nom. superfl.** — A plant name that has been superseded by a valid name; a superfluous name.
- Nut** — A hard, indehiscent fruit, with 1 seed.
- Nutlet** — A small nut; also used when referring to each lobe of the 4-lobed nuts found in borages.
- Ob** — A prefix meaning in the reverse of the typical direction.
- Obconical** — Conical in shape with attachment point at the narrow end of the cone.
- Obcordate** — Having an inverted heart shape, "heart-shaped".
- Ob lanceolate** — Reverse of lanceolate, widest above the middle and tapering to the base.
- Oblong** — Much longer than wide with parallel or nearly parallel sides.
- Obovate** — The reverse of ovate; attached at the narrow end, "egg-shaped".
- Obpyramidal** — Having the shape of an inverted pyramid.
- Obsolete** — Reduced to the point of being entirely, or almost, undetectable.

- Obtuse** — Blunt, rounded.
- Ochroleucous** — Yellowish-white to buff or cream-coloured.
- Oligotrophic** — A water body low in nutrients.
- Olivaceous** — Olive-like in colour.
- Operculate** — Provided with an operculum; a little lid, the deciduous cap of a circumscissile fruit, or a fruit that dehisces along the circumference near the tips.
- Orbicular** — Having a circular outline.
- Ovary** — The enlarged base of the pistil that encloses the ovules of angiosperms.
- Ovate** — Shaped like a hen's egg, attached at the broader end, "egg-shaped". Term applied to plane surfaces.
- Ovoid** — Shaped like a hen's egg, "egg-shaped". Term applied to solid objects.
- Ovule** — A young or undeveloped seed.
- Palea** — The innermost of the 2 bracts that subtend the floret in grasses (see lemma).
- Palmate** — Lobed or divided in a palm- or hand-like fashion, digitate.
- Panicle** — A branching inflorescence on which younger flowers are borne at the tips.
- Paniculiform** — Resembling a panicle.
- Papillate** — Covered with small minute rounded protuberances (papillae) "pimpled".
- Papilionaceous flower** — A strongly irregular flower with five petals, the lowermost 2 petals are connate (fused) and form the keel, as in Fabaceae.
- Pappus** — The modified outer perianth series crowning the ovary and achene in the Asteraceae; usually plumose, bristle-like, or of scales.
- Parietal placentation** — A pattern of placentation, in compound pistils only, where ovules are attached to the outer wall of the carpel.
- Patent** — Spreading.
- Pectinate** — "Comb-like", pinnately lobed with narrow segments arranged like the teeth of a comb.
- Pedicel** — The "stalk" of a single flower in an inflorescence, or of a spikelet in grasses.
- Pedicellate** — Having a pedicel, "stalked".
- Peduncle** — The single supporting stalk of a flower or inflorescence.
- Peltate** — An umbrella-shaped leaf whose attachment point is on the underside of the leaf rather than at the base or margin, "umbrella-like".
- Pendulous** — Hanging or drooping.
- Perennial** — Growing for more than 2 seasons.
- Perfect** — A flower that has functional stamens and pistils.
- Perfoliate** — Bearing opposite leaves whose bases are wrapped around the stem and connate, giving the appearance that the stem passes through the leaf.
- Perianth** — A collective term for the calyx and corolla.
- Perigynium** — A "pouched" bract surrounding the pistil or achene in *Carex* spp.
- Persistent** — Remaining attached.
- Petiole** — Leaf stalk.
- Phenotypic plasticity** — Ability to adapt, morphologically, to changing environmental conditions.

- Phyllode** — A somewhat expanded but bladeless petiole taking on the function of a leaf.
- Phyllopodic** — Having well developed lower leaves instead of scales.
- Piliform** — Having the shape of a long, sometimes wavy, hair.
- Pilose** — Shaggy with soft hairs, "soft-hairy".
- Pinna** (*pl.* pinnae) — One of the primary divisions of a pinnately compound leaf or frond.
- Pinnate** — Compound leaf with the leaflets on both sides of an elongated axis.
- Pinnatifid** — Pinnately lobed.
- Pinnule** — A secondary leaflet in a bipinnately compound leaf.
- Pistillate** — Flowers possessing pistils, but no functional stamens (i.e., a female flower).
- Pith** — The spongy tissue in the center of a root or stem that surrounds vascular bundles.
- Placentation** — The pattern of attachment of ovules in the ovary. *See* axile, parietal or free central placentation.
- Plumose** — "Feather-like".
- Pod** — Any type of dry, dehiscent fruit.
- Pollen** — A general term pertaining to the haploid (*n*) microspores produced in the anther.
- Polypetalous** — Flowers with all petals distinct, not united.
- Polyploidy** — Two or more sets of chromosomes (e.g., 3*n*, 4*n*, 8*n*).
- Prehensile** — Grasping.
- Prickle** — Small, sharp outgrowth from epidermis, contains no vascular tissue.
- Prismatic** — Prism-shaped.
- Procumbent** — Prostrate or trailing stem, does not usually root at nodes.
- Proliferous** — Rooting from apical bulbil (a small bulb produced above the ground, often on the flowering stem).
- Propagule** — Any part of a plant capable of growing into a new organism; e.g., seed, spore, gemma, cutting.
- Pro parte** — In part.
- Pro parte sed non typus** — Resembles, in part, but not completely the type specimen; possessing some but not all characteristics of the type specimen.
- Prostrate** — Lying flat on the ground, may root at the nodes.
- Proximal** — Denoting the region nearest to the organ's point of attachment.
- Pruinose** — *See* glaucous.
- Puberulent** — Bearing very short, loose or erect hairs, scarcely visible to the unaided eye, minutely pubescent, "short-hairy".
- Pubescent** — "Hairy".
- Pustulose** — More or less with little blisters or pustules, "minutely blistery".
- Pulverulent** — Dusty, powdery.
- Pulvinus** — Swollen tissue at the insertion point of the leaf petiole, or sometimes at a joint or a minute gland.
- Punctate** — Marked with pits or dots formed by glands or waxy spots, "pitted".
- Puncticulate** — Minutely punctate.
- Pustulose** — Minutely blistery.

Pyriform — Pear-shaped.

Raceme — An indeterminate, elongated inflorescence where single flowers are borne on pedicels arranged on a single axis; the youngest flowers are at the tips.

Racemiform — Possessing the form of a raceme.

Rachilla — The axis of a spikelet in grasses, refers to a secondary axis in sedges.

Rachis — The main stalk of an inflorescence or compound leaf, the "axis of inflorescence".

Radiate — In the Asteraceae, "heads with ray and disk flowers".

Ray (flower) — Strap-shaped corolla (ligule), as in the Asteraceae.

Receptacle — The expanded end of the stem on which floral parts are borne.

Reclining — Lying on the ground or 1 plant pressed on another.

Reflexed — Bent sharply downward or backward.

Regular (flowers) — A flower with radial symmetry; petals and sepals that are similar in shape, size, colour and orientation.

Reniform — "Kidney-shaped".

Resinous — Covered with a resin.

Reticulate — Forming a network, netted like the veins of a leaf, "net-veined".

Retrorse — Directed backward or downward.

Retuse — See emarginate.

Revolute — Leaf margins rolled toward the underside of the leaf.

Rhizome — A creeping, underground stem or rootstalk that roots at the nodes.

Rhombic — "Diamond-shaped".

Rib — A prominent vein, usually on a leaf.

Root — The descending axis of a plant that anchors and absorbs moisture from the ground, lacks nodes and internodes.

Rootstock — Used loosely to mean a main root or an underground root-like stem or branch.

Rosette — A dense cluster of flowers or leaves radiating around a central axis, usually basal in the case of leaves.

Rosulate — In the form of a rosette.

Rotate — Flat and circular in outline; "saucer-shaped" or "wheel-shaped".

Rotund — Rounded.

Rudimentary — Usually a small, imperfectly developed structure, generally reminiscent of an earlier evolutionary stage.

Rufous — "Reddish-brown".

Rugose — Possessing a "wrinkled" surface.

Rugulose — Slightly rugose.

Saccate — Shaped like a sac or pouch.

Sagittate — Shaped like the head of an arrow, triangular with the basal lobes pointing backward, "arrowhead-shaped".

Salverform — A corolla having a long slender tube that flares abruptly at the end.

Samara — A winged, indehiscent fruit.

- Samaroid** — Resembling a samara.
- Saprophytic** — A plant that derives its nutrients from dead organic matter and lacks the chlorophyll that gives most plants their green colour.
- Scaberulous** — "More or less rough".
- Scabrid** — *See* scabrous.
- Scabridulous** — "Minutely rough".
- Scabrous** — Having a roughened surface caused by very short stiff hairs or short sharp projections, "rough".
- Scabrule** — A stiff pointed projection or a short stiff hair.
- Scale** — A small, flat structure resembling the scale of a fish.
- Scape** — A flowering stem without leaves.
- Scapose** — Bearing a scape.
- Scarious** — Having chaffy, membranous, brown or "wax-papery" edges.
- Scrambling** — Slightly reclining.
- Scree** — Relatively small broken rock material characteristic of alpine areas, usually a result of freeze-thaw cycles.
- Second** — Having all flowers or branches borne on 1 side of the axis.
- Semi-aquatic** — A plant that may tolerate partial submersion in water or a plant that roots in the soil but produces aquatic leaves.
- Senescent** — The process of becoming old.
- Sensu lato** — In the broad sense.
- Sepals** — The outermost whorl of floral leaves, also called the calyx and is usually green in colour.
- Septate** — (Nodulose), transversely wrinkled at regular intervals, "cross-wrinkled".
- Septum** — A partition; in an ovary, a partition formed of the fused walls of adjacent carpels.
- Seriate** — In a series of rows.
- Sericeous** — A surface with long, soft, appressed hairs, giving a silky appearance and texture, "silky-hairy".
- Serrate** — "Sharp-toothed"; like a saw edge.
- Serrulate** — A margin with small serrated teeth, "with small-bristled teeth".
- Sessile** — Without a stalk, "unstalked".
- Seta** (*pl. setae*) — A bristle.
- Setaceous** — Bristlelike.
- Setose** — Bearing setae or bristles.
- Sheath** — A thin tubular organ that partially or wholly surrounds another organ; in grasses, the basal portion of the leaf blade that wraps around the stem.
- Shrub** — A woody perennial plant, less than 10 m tall, with several basal stems.
- Silicle** — A dry fruit of plants in the Brassicaceae generally not more than 2 times longer than wide which opens along the edges leaving the seeds attached to a central partition.
- Silique** — A long slender fruit (such as that of the Brassicaceae family) which splits open along the edges leaving seed attached to a central partition.
- Simple** — A leaf not compounded into leaflets, or an unbranched inflorescence.

- Sinuate** — A pronouncedly waved leaf margin, "wavy".
- Sinus** — "Notch", a cavity or a depression between 2 adjacent structures (e.g., the space between 2 lobes of a leaf).
- Smooth** — Without hairs of any type.
- Sordid** — "Dirty tinged".
- Sorus** (*pl. sori*) — A cluster of spore producing structures (sporangia) on the underside of a fern frond.
- Spadix** — A spike with small, densely crowded, unisexual flowers on a thick and fleshy axis, the inflorescence is subtended by a spathe.
- Spathe** — A large bract surrounding a spadix.
- Spatulate** — Broad and rounded at the tips; narrowing to the base, "spoon-shaped".
- Spiciform** — An inflorescence resembling a spike, "spike-like".
- Spike** — An unbranched inflorescence; flowers are sessile.
- Spikelet** — A small spike; in grasses, the primary inflorescence composed of 2 glumes and 1 or more florets.
- Sporangia** — Spore producing structures.
- Sporangium** — Reproductive structure of ferns that produces spores.
- Spore** — A haploid (*n*) reproductive cell.
- Sporocarp** — The structure that contains the sporangia in ferns.
- Sporophore** — A leaf bearing reproductive structures; generally used in reference to the spore bearing leaves of ferns.
- Sporophyll** — A modified leaf bearing sporangia.
- Sporophyte** — The generation in the reproductive cycle of plants that produces spores; in ferns generally refers to the conspicuous form of the plant (see gametophyte).
- Spur** — A slender and hollow floral appendage, generally nectariferous.
- Squamiform** — "Scalelike".
- Squarrose** — Having parts, generally at the tip of a structure, that are abruptly curving and spreading.
- Stamen** — The male sex organ of a plant constructed of an anther and a filament, the anther produces pollen.
- Staminate** — Flowers bearing stamens but no functional pistils; a male flower.
- Staminode** (*pl. staminodia*) — A sterile, sometimes modified stamen (*syn. staminodium*).
- Stellae** — Star-shaped structures.
- Stellate** — "Star-shaped"; having many rays radiating out from a common center.
- Steppe** — An extensive area of dry, semi-arid grassland.
- Sterile** — Infertile flowers.
- Stigma** — The generally expanded, apical portion of the pistil which is receptive to pollen.
- Stipe** — A stalk supporting the pistil; also the petiole of the frond of a fern.
- Stipitate** — Borne on a stipe or short stalk, "short-stalked".
- Stipule** — An appendage on each side of the base of a leaf or petiole at its insertion point on the stem.
- Stolon** — An elongate, creeping, above-ground horizontal stem that roots at the nodes or at the tips.
- Stramineous** — Having the colour of straw, "straw-coloured".

- Striate** — With fine longitudinal lines, channels or ridges.
- Strigillose** — Like strigose but with shorter hairs, "short appressed-hairy".
- Strigose** — A surface having sharp, appressed and straight hairs that are stiff and often basally swollen, "appressed-hairy".
- Style** — A generally elongated stalk connecting the ovary and the stigma through which the pollen tube grows.
- Styliform** — Resembling a long slender stalk, like a style.
- Stylopodium** — A disk-like enlargement at the base of the style.
- Sub** — A prefix signifying below, somewhat, slightly or rather.
- Subspecies (ssp.)** — A category of biological classification ranking immediately below the species level; also see page 5.
- Subtend** — To be positioned directly or closely beneath something.
- Subulate** — Narrowly triangular and tapering to a small point like an awl, "awl-like".
- Succulent** — Fleshy, having a soft and thickened texture.
- Sulcate** — Longitudinally grooved or furrowed.
- Superior ovary** — An ovary which is attached to the summit or center of the receptacle and is free from all other flower parts.
- Sympatric** — Occurring in the same geographic area.
- Sympodial** — Having an apparent main or central axis that is actually comprised of several short overlapping branches.
- Synonym** — An equivalent superseded name, a second name to a given taxon.
- Talus** — An accumulation of rock material on or at the base of a slope, larger material than scree.
- Taproot** — An underground tapering, main root from which smaller lateral roots may form (may be thick or thin).
- Tendril** — A long, slender, generally twisting structure from which a climbing plant acquires its support.
- Teapals** — A collective term applied to petals and sepals when they are morphologically identical.
- Terete** — A structure that is circular in cross-section but imperfectly cylindrical since the object may taper 1 or both ways.
- Ternate** — Arranged in groups of three.
- Tetrad** — In groups of four.
- Thyrse** — An elongated and densely flowered panicle, often contracted and pyramidal in shape.
- Thyrsoid** — Resembling a thyrse.
- Tomentose** — Densely pubescent with soft, matted wool-like hairs, "woolly-hairy", "woolly".
- Tomentulose** — Slightly tomentose or "slightly woolly".
- Toothed** — Bearing teeth-like protrusions.
- Torose** — Having successive swellings and contractions, "constricted between the seeds".
- Torulose** — Slightly torose.
- Tri** — A prefix meaning three or three times.
- Tricuspidate** — See cuspidate.
- Trifid** — Separation into three parts.

- Trifoliate** — A compound leaf with three leaflets.
- Trigonous** — Having three angles.
- Tripinnate** — Branched three times.
- Triquetrous** — With three sharp angles, like a triangle with concave sides.
- Trophophore** — A vegetative leaf or frond, one that does not have reproductive structures attached.
- Truncate** — Cut-off at the end; having a squared shape at the tips or base.
- Tuber** — A thickened, modified underground stem having many buds (e.g., a potato).
- Tubercle** — A small, rounded swelling.
- Tuberculate** — Bearing tubercles.
- Tuberous** — Thickened; producing tubers.
- Turbinate** — Inversely conical, "top-shaped".
- Turgid** — "Swollen".
- Turion** — A small, scaly bud-like offset on an underground stem.
- Type specimen** — A specimen identified by the author of a species that, morphologically, represents the best example of this species (*syn. holotype*).
- Umbel** — An inflorescence in which all flowers arise from a common point, younger flowers are in the center, may be simple or compound.
- Umbellate** — Arranged in umbels, umbel-like, "umbrella-like".
- Umbellet** — A secondary umbel in a compound umbel.
- Undulate** — Slightly wavy, as some margins.
- Uniseriate** — Arranged in a row or series.
- Urceolate** — "Urn-shaped".
- Valve** — One of the segments into which a dehiscent fruit splits at maturity.
- Variety (var.)** — A category of biological classification ranking immediately below the species or subspecies level; see also page 5.
- Veins** — Thin threads of vascular tissue, as in a leaf.
- Velutinous** — Having a velvety texture.
- Vernal** — Pertaining to, or appearing in, spring.
- Verrucose** — Covered with wart-like protrusions, "wartlike".
- Verticillate** — *See* whorled.
- Verticils** — *See* whorl.
- Vestige** — The reduction of a structure whose functional importance has decreased with evolutionary time.
- Villous** — With long and soft, unmatted hairs, "long-hairy".
- Viscid** — Glutinous, greasy, or sticky.
- Wanting** — Lacking.
- Whorl** — Three or more structures arranged in a circular manner around a common insertion point.
- Whorled** — Having whorls.
- Wing** — A thin membranous outgrowth.
- Winged** — Bearing wings.

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